



Missouri Department of Transportation and
Highway Patrol Employees' Retirement System

A Component Unit of the State of Missouri

Scott Simon, Executive Director
Jennifer Even, Chief Financial Officer
1913 William Street, PO Box 1930
Jefferson City, MO 65102-1930
(800) 270-1271, (573) 298-6080

2014

On Your Mark



Comprehensive Annual Financial Report
For the Fiscal Years Ended June 30, 2014 & 2013

MoDOT and Patrol Employees' Retirement System



Mailing Address

PO Box 1930
Jefferson City, Missouri 65102-1930

Street Address

1913 William Street
Jefferson City, Missouri 65109

Phone Numbers

Main Line
(573) 298-6080

Toll Free
(800) 270-1271

Office Directory
(573) 298-6081

Fax Numbers

Administrative
(573) 526-5895

Benefits
(573) 522-6111

E-Mail Address

mpers@mpers.org

WebSite

www.mpers.org



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Notes

A photograph of several runners on a track, captured from a low angle. The runners are in motion, with their legs and feet visible. Long, dark shadows are cast across the track surface, indicating bright sunlight. The track has white lane markings.

Now is the time to start planning for retirement.

“If you want to become the best runner you can be, start now. Don’t spend the rest of your life wondering if you can do it.”

—Priscilla Welch

Certificate of Achievement for Excellence in Financial Reporting



Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

**Missouri Department of Transportation
and Highway Patrol Employees'
Retirement System**

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2013

Executive Director/CEO

Public Pension Coordinating Council Award



Public Pension Coordinating Council

***Public Pension Standards Award
For Funding and Administration
2013***

Presented to

***MoDOT and Highway Patrol Employees'
Retirement System***

In recognition of meeting professional standards for
plan funding and administration as
set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of

National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

Alan H. Winkle
Program Administrator

Letter of Transmittal

Scott Simon
Executive Director



**MoDOT & Patrol
Employees' Retirement System**

Pam Henry
Assistant Executive Director

November 20, 2014

To the Board of Trustees and System Members:

We are pleased to provide this Comprehensive Annual Financial Report (CAFR), of the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (MPERS), for the fiscal year ended June 30, 2014. This report is intended to provide MPERS' stakeholders with a thorough review of the System's operations for the past fiscal year. The material presented in this report has been prepared in a manner intended to be useful and informative to MPERS' members, the management of the Missouri Department of Transportation (MoDOT), the Missouri State Highway Patrol (MSHP), and the elected officials of the state of Missouri.

MPERS is a traditional defined benefit pension plan providing lifetime retirement benefits to eligible MoDOT and Highway Patrol employees. The monthly retirement and survivor benefits provided by MPERS are a valuable source of retirement income for the members we serve. These benefits, when combined with social security, provide the basic foundation for our members to retire with dignity.

The average monthly benefit of a new MPERS retiree is \$2,130, which equates to \$25,560 per year. Given the increasing cost of living, this amount alone will not provide a life of luxury for the retiree. This monthly benefit, however, and those provided by other traditional pension plans, have a significant impact that reaches beyond the retirees served. Over the past 10 years alone, MPERS has paid over \$1.9 billion in benefit payments to its members. Most of these members, retirees and beneficiaries reside in Missouri, reinvesting their retirement dollars in housing, goods, and services. In turn, the local economies benefit from these expenditures, which help to fuel the economy. It is easy to see that defined benefit pensions have a long-term positive impact on our economy and the lives of our members.

Report Contents and Structure:

This CAFR is designed to comply with the statutory reporting requirements stipulated in Sections 104.190, 104.1006, and 105.661 of the Revised Statutes of Missouri (RSMo), as amended.

To the best of our knowledge and belief, the information presented is accurate in all material respects and is reported in a manner designed to fairly present the financial position of the fund. Some amounts included in the financial statements and elsewhere may be based on estimates and judgments. These estimates and judgments were products of the best business practices available. The accounting policies followed in preparing the basic financial statements conform with U.S. generally accepted accounting principles. Financial information presented throughout the CAFR is consistent with information displayed in the basic financial statements.

The MPERS Board of Trustees is ultimately responsible for the CAFR and the basic financial statements. MPERS' Executive Director and staff prepare the information contained in the CAFR and the financial statements to assist the Board in fulfilling their statutory duty.

Systems of internal controls and supporting procedures are maintained to provide assurances that transactions are authorized, assets are safeguarded, and proper records are maintained. These controls include standards in the hiring and training of employees, the establishment of an organizational structure, and the communication of policies and guidelines throughout the organization. Inherent limitations exist in all control systems. No evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud have been detected.

Office Location: 1913 William St., Jefferson City, MO 65109 • **Mailing Address:** Post Office Box 1930, Jefferson City, MO 65102-1930
Telephone Number: (573) 298-6080 • **Toll Free:** 1-800-270-1271 • **Admin. Fax:** (573) 526-5895 • **Benefits Fax:** (573) 522-6111
Website: www.mpers.org • **E-Mail:** mpers@mpers.org

Letter of Transmittal

In accordance with Section 104.190, RSMo, as amended, an independent auditing firm, Williams-Keepers, LLC, has audited the financial statements included in this report and has issued an unqualified opinion (meaning no audit findings on MPERS' financial statements). Their opinion letter is presented in the Financial Section of this CAFR. Management's Discussion and Analysis (MD & A) immediately follows the Independent Auditors' Report and provides a narrative introduction, overview, and analysis of the basic financial statements. Management's Discussion and Analysis complements this letter of transmittal.

Background Information:

MPERS was established by Senate Bill 66. Under this legislation, employees of MoDOT and the Highway Patrol became members of the retirement system on September 1, 1955. Effective October 1, 1955, the System accepted 109 retirements.

The plan provisions have changed many times over the years. The System offers not only enhanced retirement and disability benefits, but also benefits for survivors of active and retired members, benefits for qualified terminated-vested members, and death benefits. Beginning January 1, 2011, new employees hired for the first time in a benefit eligible position are required to contribute 4% of pay to help fund the cost of their MPERS benefits.

An eleven-member Board of Trustees is responsible for the oversight of MPERS. The Trustees serve as fiduciaries to the members and are responsible for selecting and retaining competent management. The Trustees and management jointly establish sound policies and objectives, and monitor operations for compliance and oversee performance.

As an instrumentality of the state, MPERS is considered a component unit of the state of Missouri for financial reporting purposes and, as such, the financial statements in this report are also included in the State of Missouri's Comprehensive Annual Financial Report.

Fiscal Year 2014 Highlights:

Maintaining and protecting member records is a core responsibility of MPERS' staff and the Board of Trustees. Through the implementation of our new pension administration system in recent years, all member files are now stored and maintained electronically. Last year, an IT Architectural Audit was conducted to assess the risks and efficiencies of MPERS' network, applications, operational controls, and personal computers. As a result of the audit, in FY2014, MPERS streamlined its technology infrastructure. Previously, MSHP housed our servers and MoDOT maintained our computers. Now, our pension administration system is housed on virtual servers maintained by Levi, Ray and Shoup (LRS), the system developer. Since MPERS does not have internal IT staff, Huber and Associates has been contracted to maintain our computers, provide vulnerability testing, and offer professional technology consulting.

During the year, MPERS took several initiatives to go paperless: 1) Board of Trustee election; 2) distribution of Board meeting materials; and 3) monthly benefit payments. These initiatives will save the system thousands of dollars each year.

Four positions on the Board of Trustees are nominated and elected to serve four-year terms by MPERS' membership: 1) active MoDOT; 2) active MSHP; 3) retired MoDOT; and 4) retired MSHP. For active members, the entire election process in 2014 was paperless. Email was used exclusively for communicating the election to active members. Voting was conducted online through Secure Member Access. Since a portion of our retirees do not have email, or access to a computer, we mailed all election correspondence to retirees the old-fashioned way – letter, stamp, envelope, post office. When the terms of these four representatives expire in 2018, the next election will be totally electronic.

Prior to each Board of Trustees meeting, staff compiles and distributes a significant amount of information to help the Trustees prepare for the Board meeting. Previously, copies of the materials were made, bound, and mailed to each Trustee. Now, the information is converted to a single portable document format (pdf) and posted on the secure portion of the Trustees' website. Each Trustee reviews the information online and brings a laptop or iPad to the meetings to view the documents.

Detailed information regarding monthly benefit payments is available online through Secure Member Access. In January, MPERS stopped mailing monthly payment information to benefit recipients on direct deposit. Previously, those on direct deposit received a payment notice in the mail each month.

Direct deposit is faster, safer, and the preferred method for dispensing monthly benefit payments. In March, those not on direct deposit were issued a debit pay card. Instead of receiving a paper check each month, the benefit is loaded electronically onto the recipient's pay card.

Letter of Transmittal

Actuarial Funding Status:

The funding objective of MPERS is to meet future benefit obligations of retirees and beneficiaries through contributions and investment earnings. All funding from MoDOT and approximately 90% of funding from the MSHP come from the State Highway and Transportation Fund. The remaining 10% of funding for the MSHP comes from other revenue sources. Although Missouri, like most of the country, is facing tough economic times, our employers continue to provide the contributions required to appropriately fund the System.

During the year ended June 30, 2014, the funded ratio of MPERS, which covers 18,075 participants, increased from 46.2% to 49.2%. System assets earned a 17.56% return on a market basis, although the fund recognized an 11.4% rate of return on an actuarial basis after accounting for the smoothing of the 2012 loss and the 2013 and 2014 gains. Overall, there was an experience gain of \$75 million. This gain was made up of a \$59 million investment gain and a \$16 million liability gain.

Each year an independent actuarial firm conducts a valuation to determine the actuarial soundness of the Plan, based on its long-term obligations and the sufficiency of current contribution levels to fund the liabilities over a reasonable time frame. In our most recent valuation, dated June 30, 2014, our actuary concluded that the System continues to be financed in accordance with actuarial principles of level percent of payroll financing. This statement is based upon the fact that the employers are contributing to the System based upon actuarially determined rates and presumes a continuation of payment of actuarially determined contributions. Additional information regarding the financial condition of the System can be found in the Actuarial Section of this report.

In an effort to address the System's underfunding situation, in September 2006, the Board of Trustees adopted a permanent funding policy that was intended to improve MPERS' funded status over time.

The permanent funding policy provided:

- The total contribution is based on the Plan's normal cost plus a 29-year amortization period for MPERS' unfunded liabilities. The financing period is a closed period starting July 1, 2007.

On September 17, 2009, after the market downturn, the Board of Trustees adopted the following temporary accelerated funding policy:

- The total contribution is based on the Plan's normal cost plus a 15-year amortization period for unfunded retiree liabilities and a 30-year amortization period for other unfunded liabilities. Both amortization periods are closed periods starting July 1, 2010.
- The temporary accelerated policy will remain in effect until such time as the retiree liability becomes 100% funded or the permanent policy produces a higher contribution rate.

As of June 30, 2014, the permanent policy is at a closed amortization period of 21 years and the temporary accelerated policy is at a closed amortization period of 10 years for unfunded retiree liabilities and 25 years for other unfunded liabilities.

Investment Activities:

State statutes require the System to make investments using the same care, skill, and diligence that a prudent person acting in a similar capacity would use. In fulfilling this obligation, the Board of Trustees has established a formal investment policy to clearly define the roles and responsibilities of the Board, staff and consultants, and to ensure that System assets are invested in a diversified portfolio following prudent investment standards. The Board of Trustees determines the broad asset allocation policies and return objectives of the Plan. To implement and execute these policies, the Board retains investment staff, consultants, a master custodian and other advisors.

As of June 30, 2014, MPERS' investment portfolio had a total market value of \$1.917 billion, representing a return of 17.59% for the fiscal year. The portfolio continues to perform very well versus the peer universe. Relative to our peer group, the 17.59% return for FY2014 ranked MPERS in the 15th percentile, outpacing 85% of other public funds within the universe. The trailing three-year performance of 11.06% ranks MPERS in the top 6% of the peer universe. The trailing ten-year performance of 7.62% ranks MPERS in the top 10% of the universe.

Awards:

The Government Finance Officer Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to MPERS for its FY2013 CAFR. This was the ninth consecutive year that MPERS has achieved this prestigious award. The Certificate of Achievement is the highest form of recognition for excellence in state and local government financial reporting. To be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized CAFR. This report must satisfy both generally accepted

Letter of Transmittal

accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year. We believe that our current CAFR continues to meet the program's requirements, and therefore, we are submitting this report to GFOA to determine its eligibility for another certificate.

MPERS also received the Public Pension Coordinating Council (PPCC), Public Pension Standards Award, in recognition of meeting professional standards for plan design and administration. This is the tenth consecutive year MPERS received the council's award. This award is presented by the PPCC, a confederation of the National Association of State Retirement Administrators (NASRA), the National Conference on Public Employee Retirement Systems (NCPERS) and the National Council on Teacher Retirement (NCTR).

Acknowledgements and Distribution:

This report, prepared by the MPERS Executive Director and staff, is intended to provide comprehensive and reliable information about the System, to demonstrate compliance with legal provisions, and to allow for the evaluation of responsible stewardship of the System's funds.

Copies of this report are provided to the Governor, the State Auditor, and the Joint Committee on Public Employee Retirement. It is also distributed to all MoDOT divisions, district offices, Highway Patrol general headquarters, and troop headquarters. These offices form the link between MPERS and its members, and their cooperation contributes significantly to the success of MPERS. We hope all readers of this report find it informative and useful. Additional copies will be furnished upon request. An electronic version of this report is available on the MPERS website at www.mpers.org.

We express our gratitude to the members of the Board, the staff, the consultants, and the many people who have worked so diligently to assure the continued successful operation of MPERS. The steady, monthly benefit payments offered by defined benefit plans, like MPERS, provide peace of mind and security for retirees and their families. However, planning for retirement is like training for a marathon. To be financially fit during retirement requires self-discipline, dedication, and most importantly, starting as soon as possible; hence, the theme for this year's CAFR is "On Your Mark." MPERS is committed to providing a foundation for financial security to plan participants through the delivery of quality benefits, exceptional member service, and professional plan administration.

Respectfully submitted.



Scott Simon
Executive Director



Lloyd J. Carmichael
Board Chairman

Board of Trustees

MPERS is governed by a Board of Trustees. As set out in Section 104.160 of the Revised Statutes of Missouri (RSMo), the Board is comprised of eleven members:



Lloyd "Joe" Carmichael
Board Chair
Commission Member
 Highways & Transportation
 Commissioner
 Term Expires 3-1-2015



Colonel Ron Replogle
Board Vice Chair
Superintendent of the
Missouri State Highway
Patrol
 Ex-Officio Member



Sue Cox
MoDOT Retiree
Representative
 Elected by Retired
 Members of MoDOT
 Term Expires 7-1-2018



Major J. Bret Johnson
MSHP Employees'
Representative
 Elected by Patrol Employees
 Term Expires 7-1-2018



Senator Mike Kehoe
State Senator
 District 6
 Appointed by
 President Pro-Tem of the Senate



Dave Nichols
Director of the Missouri
Department of Transportation
 Ex-Officio Member



Representative
Shawn Rhoads
State Representative
 District 154
 Appointed by the
 Speaker of the House



William "Bill" Seibert
MSHP Retiree Representative
 Elected by Retired
 Members of MSHP
 Term Expires 7-1-2018



Kenneth H. Suelthaus
Commission Member
 Highways & Transportation
 Commissioner
 Term Expires 3-1-2015



Todd Tyler
MoDOT Employees'
Representative
 Elected by MoDOT Employees
 Term Expires 7-1-2018

Vacant

Vacant
Commission Member
 Highways & Transportation
 Commissioner



Administrative Organization

Executive Team



Front Row: Larry Krummen-Chief Investment Officer, Scott Simon-Executive Director

Back Row: Jennifer Even-Chief Financial Officer, Greta Bassett-Seymour-General Counsel,
Pam Henry-Assistant Executive Director

Our Mission is to provide a foundation for financial security to plan participants by delivering quality benefits and exceptional member service through professional plan administration and prudent management of assets, at a reasonable cost to the taxpayers of Missouri.

Administrative Organization

Director's Office

The Director's Office staff provides administrative oversight and support in the areas of legislation, operations, benefits, and investments.

Financial Services

The Financial Services section is responsible for maintaining all the financial records of MPERS. The chief financial officer (accountant) interacts with the investment custodian, the auditors, the depository bank, Missouri's Department of Revenue, and the Internal Revenue Service. In addition, the accountant assists the chief investment officer in tracking and predicting target cash balances, participates in annual budget development, prepares monthly budget-to-actual reports, and calculates monthly premium payments to the long-term disability insurer. The accountant also processes MPERS' semi-monthly office payrolls, reconciles monthly benefit payments and contributions/payrolls posted, and reconciles investment activity.

Investments

The Investments section staff works closely with the general investment consultant to oversee the investment portfolio and provide consulting services to the Board and the executive director. This includes, but is not limited to: (a) formulating investment policy and asset recommendations, (b) providing recommendations on the selection, (c) monitoring and evaluating external investment advisors, (d) measuring and reporting on investment performance, (e) conducting market research on political, financial, and economic developments that may affect the System, and (f) serving as a liaison to the investment community.

Legal Services

The Legal Services section advises the executive director and Board on legal matters, reviews and approves investment and other contracts for MPERS, advises staff on the application of state and federal statutes affecting the administration of plan benefits, responds to requests from members and their attorneys related to plan benefits, engages in or oversees litigation affecting MPERS, and assists in developing policies, rules, and legislation impacting MPERS' operations and the administration of plan benefits.

Member Services

The Member Services section consists of two units devoted to serving member needs.

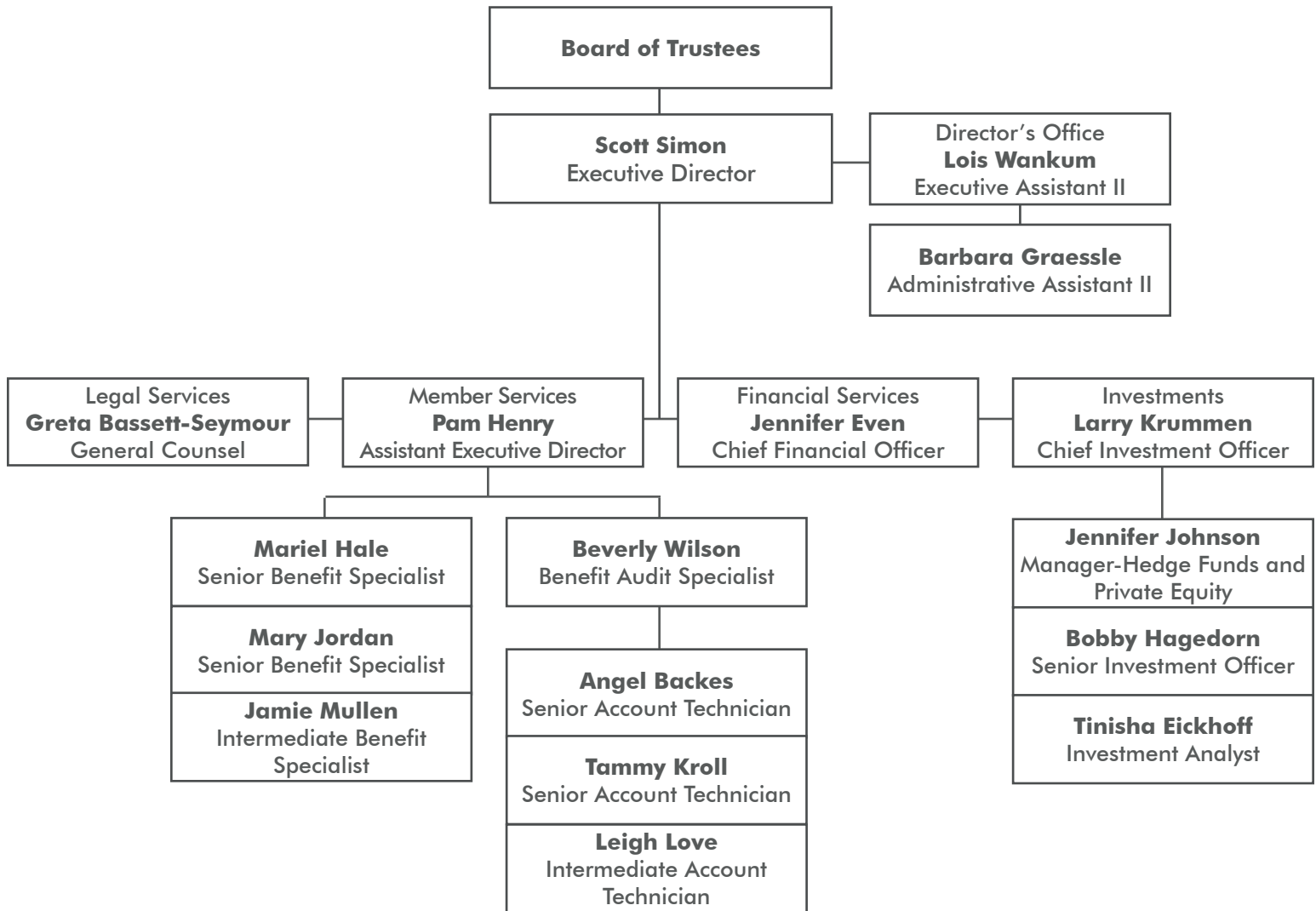
The Benefits Unit is responsible for contact with the membership regarding the benefit programs administered by MPERS, which include retirement and disability. The benefit staff is responsible for preparing and delivering the pre-retirement and benefit basics seminars in addition to assisting with the development of member communication material.

The Payroll Unit is responsible for establishing and maintaining all membership records including:

- (a) maintaining member data on the pension administration system, (b) verifying retirement calculations, (c) balancing payroll deductions, (d) verifying SAM II data against exception reports, and (e) entering payroll, service, and leave data into the System's computerized database.

Administrative Organization

The executive director of MPERS has charge of the offices and records of the System and hires such employees deemed necessary, subject to the approval of the Board of Trustees. The System employs seventeen full-time staff.



Professional Services

The following firms were retained at fiscal year-end by the Board of Trustees to serve in professional capacities or provide consultant services. Please refer to pages 45 and 46 in the Investment Section for the Schedule of Investment Expenses and Brokerage Commissions for the investment professionals.

Actuary

Gabriel, Roeder, Smith & Company
Southfield, Michigan

Legislative Consultant

Michael G. Winter Consultants, LLC
Jefferson City, Missouri

Auditor

Williams-Keepers, LLC
Jefferson City, Missouri

Master Trustee/Custodian

The Northern Trust Company
Chicago, Illinois

Investment Consultant

New England Pension
Consultants (NEPC)
Cambridge, Massachusetts

Risk Management/Insurance Consultant

Charlesworth Benefits
Overland Park, Kansas

Information Technology

Levi, Ray & Shoup, Inc.
Springfield, Illinois

Huber & Associates
Jefferson City, Missouri

Long-Term Disability Insurer

The Standard Insurance Company
Portland, Oregon

Professional Services

Investment Managers

Aberdeen Asset Management	Philadelphia, Pennsylvania
ABRY Partners	Boston, Massachusetts
Acadian Asset Management	Boston, Massachusetts
AEW Partners	Boston, Massachusetts
Albourne America	San Francisco, California
American Infrastructure MLP	Foster City, California
Anchorage Capital Group	New York, New York
Apollo Real Estate	New York, New York
AQR Capital Management	Greenwich, Connecticut
Audax Group	Boston, Massachusetts
Barclays Global Investors	San Francisco, California
Bernzott	Camarillo, California
BlueCrest Capital Management	St. Peter Port, Guernsey
Brevan Howard	New York, New York
Bridgewater Associates	Westport, Connecticut
Capital Partners	Norwalk, Connecticut
CBRE Investors	Baltimore, Maryland
Cevian Capital Limited	Jersey, Channel Islands
Clarion Partners	Jersey, Channel Islands
CarVal Investors (CVI)	Minnetonka, Minnesota
Deephaven Capital Management	Minnetonka, Minnesota
EIF Management	Needham, Massachusetts
Energy & Mineral Group	Houston, Texas
Enhanced Investment Technologies (INTECH)	Palm Beach Gardens, Florida
GMO	Boston, Massachusetts
Golub Capital	New York, New York
Grove Street Advisors	Wellesley, Massachusetts
Gryphon	San Francisco, California
GSO Capital Partners	New York, New York
ING Clarion	New York, New York
KPS	New York, New York
Luxor Capital	New York, New York
Metacapital Management	New York, New York
Natural Gas Partners	Houston, Texas
Ned Davis	Venice, Florida
Northern Shipping	Stamford, Connecticut
Och-Ziff Real Estate	New York, New York
OCP	Singapore
Ospraie Management	New York, New York
Partner Fund Management	San Francisco, California
Peak 6	Chicago, Illinois
Pinnacle Associates	New York, New York
Principal Global Investors	Des Moines, Iowa
RK Tessra	Denver, CO
Ridgewood	Montvale, New Jersey
RMK Timberland	Winston-Salem, North Carolina
Rothschild Asset Management	New York, New York
Sciens	New York, New York
Silchester International Investors Limited	New York, New York
Stark Investments (Shepherd)	Milwaukee, Wisconsin
Stelliam Investment Management	New York, New York
Taconic Capital Advisors	New York, New York
The Clifton Group	Edina, Minnesota
The Northern Trust Company	Chicago, Illinois
Torchlight Investors	New York, New York
Tortoise Capital Advisors	Leawood, Kansas
CenterSquare Investment Management (formally Urdang)	Plymouth Meeting, Pennsylvania
ValueAct Capital	San Francisco, California
Vectis Healthcare	Boston, Massachusetts

Notes

Are you on track to a financially secure retirement?

"It is better, I think, to begin easily and get your running to be smooth and relaxed and then to go faster and faster."

—Henry Rono

Independent Auditors' Report



2005 West Broadway, Ste. 100, Columbia, MO 65203
OFFICE (573) 442-6171 FAX (573) 777-7800

3220 West Edgewood, Ste. E, Jefferson City, MO 65109
OFFICE (573) 635-6196 FAX (573) 644-7240

www.williamskeepers.com

INDEPENDENT AUDITORS' REPORT

The Board of Trustees
Missouri Department of Transportation and
Highway Patrol Employees' Retirement System

Report on the Financial Statements

We were engaged to audit the accompanying financial statements of the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (the System), which comprise the statements of fiduciary net position as of June 30, 2014 and 2013, and the related statements of changes in fiduciary net position for the years then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with U.S. generally accepted auditing standards. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the System's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the System at June 30, 2014 and 2013, and the changes in fiduciary net position for the years then ended, in conformity with U.S. generally accepted accounting principles.

Independent Auditors' Report

Other Matters

Required Supplementary Information

U.S. generally accepted accounting principles require that the management's discussion and analysis on pages 3 through 6 and the schedules of employers' net pension liability, changes in the employers' net pension liability, employers' contributions, investment returns, and related notes on pages 27 through 30 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context.

We have applied certain limited procedures to the required supplementary information in accordance with U.S. generally accepted auditing standards, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audits were conducted for the purpose of forming opinions on the financial statements that collectively comprise the System's financial statements as a whole. The introductory, investment, actuarial and statistical sections and the additional information presented on pages 31 through 33 are presented for purposes of additional analysis and are not a required part of the financial statements.

The additional information presented on pages 31 through 33 is the responsibility of management and was derived from and relate directly to the underlying accounting and other records used to prepare the financial statements. The additional information presented on pages 31 through 33 has been subjected to the auditing procedures applied in the audits of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with U.S. generally accepted auditing standards. In our opinion, the additional information presented on pages 31 through 33 is fairly stated in all material respects in relation to the financial statements as a whole.

The introductory, investment, actuarial and statistical sections have not been subjected to the auditing procedures applied in the audits of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.



November 18, 2014

Management's Discussion and Analysis

The management of the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (the System, or MPERS) provides this discussion and analysis of the System's financial performance for the fiscal years ended June 30, 2014 and 2013. While this discussion is intended to summarize the financial status of MPERS, readers should consider this information in conjunction with the information that is furnished in the more detailed financial statements and corresponding notes.

DESCRIPTION OF BASIC FINANCIAL STATEMENTS

As required by the Governmental Accounting Standards Board (GASB) accounting standards, this financial report consists of Management's Discussion and Analysis (this section), the basic financial statements (including notes to the basic financial statements), and other required supplementary information.

Financial Statements report information about MPERS, using accounting methods similar to those used by private-sector companies, by using the economic resources measurement focus and accrual basis of accounting. These statements provide both long-term and short-term information about the System's overall financial status. These statements follow this Management's Discussion and Analysis section:

- The **Statement of Fiduciary Net Position** includes all the System's assets and liabilities, with the difference between the two reported as net position.
- The **Statement of Changes in Fiduciary Net Position** accounts for all the current year's additions (income) and deductions (expenses), regardless of when cash is received or paid.

Notes to the Financial Statements are included following the financial statements. The notes to the financial statements provide additional information that is essential for a full understanding of the data provided in the financial statements.

Required Supplementary Information follows the notes and further supports the information in the financial statements.

ANALYSIS OF FINANCIAL POSITION AND RESULTS OF OPERATIONS

Overall, the financial position of MPERS improved by \$272 million, reported as the "net increase." This is primarily a result of net appreciation in the fair value of investments for the year ended June 30, 2014. With this net increase in value in FY14, the funded status of the plan showed an increase of 2.94%.

The following schedules present summarized comparative data from the System's financial statements for each of the fiscal years ended June 30, 2014, 2013, and 2012. Following each schedule is a brief summary providing explanation and analyses of the major reasons for changes in the condensed financial statements.

Management's Discussion and Analysis

Summarized Comparative Statements of Fiduciary Net Position

	As of June 30, 2014	As of June 30, 2013	As of June 30, 2012	% Change 2014/2013	% Change 2013/2012
Cash and Receivables	\$ 15,256,813	\$ 39,152,820	\$ 17,123,877	-61%	129%
Investments	1,937,710,335	1,651,622,264	1,533,375,977	17%	8%
Invested Securities					
Lending Collateral	86,192,337	92,327,975	57,498,405	-7%	61%
Capital Assets	2,283,961	2,627,203	2,914,845	-13%	-10%
Other Assets	5,899	69,961	5,448	-92%	1184%
Total Assets	2,041,449,345	1,785,800,223	1,610,918,552	14%	11%
Accounts Payable	7,784,728	5,298,016	11,356,972	47%	-53%
OPEB Obligation	599,399	554,370	459,906	8%	21%
Securities Lending					
Collateral	75,609,005	94,215,127	57,698,128	-20%	63%
Total Liabilities	83,993,132	100,067,513	69,515,006	-16%	44%
Net Position	<u>\$1,957,456,213</u>	<u>\$1,685,732,710</u>	<u>\$1,541,403,546</u>	16%	9%

The decrease in cash and receivables is primarily attributable to lower investment sales receivables as of June 30, 2014. Some fluctuations in this area are normal, based on investment activity. The increase from FY12 to FY13 is primarily attributable to higher investment sales receivables which were normal fluctuations based on investment activity.

The System's investments represent the main component of total assets. These investments include holdings of stock, government-sponsored enterprises, bonds, mortgages, real estate, timber, securities lending collateral, limited partnerships, and other fixed income investments. The increase in fair value of investments as of June 30, 2014 is due to more favorable market conditions experienced during FY14. The FY14 investment return was 17.59%. The increase in fair value from FY12 to FY13 is due to higher than expected investment returns of 13.42%.

Capital assets decreased in FY14 and FY13 due to depreciation of existing assets and only minimal purchases of new equipment during the year.

The largest component of liabilities is securities lending collateral. This represents the amount owed for collateral to be returned as the result of securities lent. The decrease in securities lending collateral from FY13 to FY14 is due to fewer securities being utilized for lending. The increase in securities lending collateral from FY12 to FY13 is due to the increase in the fair value of investments. The corresponding securities lending collateral asset is valued at a higher amount at June 30, 2014 due to the market value of the securities on loan being more than par value. The corresponding securities lending collateral asset is valued at lower amounts at June 30, 2013 and 2012 due to the market value of the securities on loan being less than the par value.

The increase in accounts payable for FY14 is primarily attributable to higher investment purchases payable and the decrease in accounts payable for FY13 is primarily attributable to lower investment purchases payable. Some fluctuations in this area are normal, based on investment activity.

The OPEB obligation of \$599,399 at June 30, 2014, \$554,370 at June 30, 2013, and \$459,906 at June 30, 2012 represents a liability recorded pursuant to GASB Statement No. 45, which was implemented in FY08. This liability reflects the System's provision of post-employment health care benefits through its participation in the MoDOT and MSHP Medical and Life Insurance Plan. As allowed by the GASB, this reporting requirement is being implemented prospectively, as prior years' data is not available. This plan is an internal service fund of the Missouri Department of Transportation (MoDOT); therefore, assets have not been set aside. With this, the increases from FY13 to FY14 and from FY12 to FY13 are expected.

Management's Discussion and Analysis

The System's total net position was \$1.957 billion at June 30, 2014, a \$272 million increase from the \$1.685 billion at June 30, 2013. This is in addition to an increase of the previous year, when net position increased \$144 million from the June 30, 2012 amount of \$1.541 billion to the June 30, 2013 amount of \$1.685 billion.

Summarized Comparative Statements of Changes in Fiduciary Net Position

	Year Ended June 30, 2014	Year Ended June 30, 2013	Year Ended June 30, 2012	% Change 2014/2013	% Change 2013/2012
Contributions	\$ 187,398,786	\$ 173,703,401	\$ 166,256,835	8%	4%
Net Investment Income	319,445,655	198,139,438	42,091,564	61%	371%
Other Income	125	1,650	13,760	-92%	-88%
Net Additions	506,844,566	371,844,489	208,362,159	36%	78%
Benefits	231,384,708	224,518,100	219,704,320	3%	2%
Administrative Expenses	3,736,355	2,997,225	2,934,969	25%	2%
Total Deductions	235,121,063	227,515,325	222,639,289	3%	2%
Net Increase (Decrease)	271,723,503	144,329,164	(14,277,130)	88%	-1111%
Net Position-Beginning	1,685,732,710	1,541,403,546	1,555,680,676	9%	-1%
Net Position-Ending	\$1,957,456,213	\$1,685,732,710	\$1,541,403,546	16%	9%

The main component of the changes in contributions to MPERS is employer contributions. In FY14 the contribution rate for the non-uniformed Highway Patrol and MoDOT increased by 3.33% and the contribution rate for the uniformed Highway Patrol increased by 0.20% from the FY13 rates, therefore increasing the FY14 amount of employer contributions. In FY13 the contribution rate for the non-uniformed Highway Patrol and MoDOT increased by 5.47% from the FY12 rate, therefore increasing the FY13 amount of employer contributions, even though the contribution rate for the uniformed Highway Patrol decreased by 3.6%. This increase in total employer contributions, despite one rate decreasing, is an effect of the active member population distribution between groups.

Net investment income, a primary component of plan additions, resulted in income of over \$319 million for FY14. The income represented a 17.59% return for the fiscal year ended June 30, 2014. In comparison, the FY13 gain of \$198 million represented an investment return of 13.42%. Annual fluctuations within the broad investment markets are outside of the control of the System and are expected to fluctuate from year to year. The Board of Trustees has approved a diversified asset allocation that, over time, is expected to realize the assumed actuarial rate of investment return of 7.75%.

Administrative expenses increased in FY14 due to adding investment staff and moving to an outsourced hosted IT solution.

Benefits increased primarily due to increases in benefit rolls for all of the years shown.

Management's Discussion and Analysis

CURRENTLY KNOWN FACTS AND RECENT EVENTS

Based on the June 30, 2013 actuarial valuation, the Board of Trustees approved an increase in the required state contribution, effective July 1, 2014. The rate applied to non-uniformed payroll (MoDOT, civilian patrol, and MPERS) will increase from 54.25% to 58.76%. The rate applied to uniformed patrol payroll will increase from 55.23% to 58.19%. The increase in both rates is partially due to a change in actuarial assumptions. The assumed investment rate of return was lowered from 8.25% to 7.75%, thus causing upward pressure on the contribution rates. Lower than expected covered payroll dollars for MoDOT was also a factor in the increase in contribution rate for that group of active members.

Based on the June 30, 2014 actuarial valuation, the Board of Trustees approved a slight decrease in the required state contribution rate, effective July 1, 2015. The rate applied to non-uniformed payroll (MoDOT, civilian patrol, and MPERS) will decrease from 58.76% to 58.05%. The rate applied to uniformed patrol payroll will decrease from 58.19% to 57.76%. The decrease in both rates is primarily due to positive investment returns.

In June 2012, the Governmental Accounting Standards Board approved new accounting and reporting standards for pensions provided by state and local governments. The new statements are GASB 67, Financial Reporting for Pension Plans and GASB 68, Accounting and Financial Reporting for Pensions. GASB 67 applies to MPERS and other state and local pension plans established as trusts, to be implemented in fiscal years beginning after June 15, 2013. GASB 68 applies to the employers that participate in MPERS as well as other governmental employers that sponsor or contribute to pension plans, to be implemented in fiscal years beginning after June 15, 2014. The new accounting and reporting standards break the link between accounting and funding. While these changes will affect the accounting measures, they do not have an effect on the actuarial methods and assumptions used by MPERS to determine the employer contributions needed to fund the plan. The new standards will, however, impact the financial statement presentation for pension accounting and related disclosures for MPERS and participating employers. MPERS implemented both GASB 67 and GASB 68 in FY14.

CONTACTING THE RETIREMENT SYSTEM'S MANAGEMENT

This financial report is designed to provide a general overview of the System's finances. Questions about this report or requests for additional financial information should be sent to:

MoDOT and Patrol Employees' Retirement System
PO Box 1930
Jefferson City, MO 65102-1930
mpers@mpers.org

Statements of Fiduciary Net Position

As of June 30, 2014 and 2013

	2014	2013
ASSETS:		
Cash	\$ 194,136	\$ 94,346
Receivables		
Contributions	7,705,671	7,094,490
Accrued Interest and Income	7,241,177	3,587,888
Investment Sales	97,323	28,354,363
Other	18,506	21,733
Total Receivables	15,062,677	39,058,474
Investments, at Fair Value		
Stocks and Rights/Warrants	595,943,370	538,614,992
Government Obligations	145,598,291	119,241,225
Corporate Bonds	32,651,714	30,906,710
Real Estate	203,400,219	178,171,999
Mortgages and Asset-Backed Securities	176,678,785	125,215,805
Hedge Funds (Absolute Return)	204,257,912	173,502,695
Tactical Fixed Income	-	7,974,681
Short-Term Investments	39,766,147	38,068,642
Limited Partnerships	539,413,897	439,925,515
Total Investments	1,937,710,335	1,651,622,264
Invested Securities Lending Collateral	86,192,337	92,327,975
Prepaid Expenses	5,899	69,961
Net Investment in Capital Assets		
Land	84,000	84,000
Building	581,619	581,619
Furniture, Equipment and Software	3,506,428	3,479,053
Accumulated Depreciation	(1,888,086)	(1,517,469)
Net Investment in Capital Assets	2,283,961	2,627,203
TOTAL ASSETS	\$2,041,449,345	\$1,785,800,223
LIABILITIES:		
Accounts Payable	1,554,399	1,427,820
OPEB Obligation	599,399	554,370
Security Lending Collateral	75,609,005	94,215,127
Investment Purchases	6,230,329	3,870,196
TOTAL LIABILITIES	83,993,132	100,067,513
NET POSITION RESTRICTED FOR PENSIONS	\$1,957,456,213	\$1,685,732,710

See accompanying Notes to the Financial Statements.

Statements of Changes in Fiduciary Net Position

For the Years Ended June 30, 2014 and 2013

	2014	2013
<u>ADDITIONS:</u>		
Contributions-Employer	\$ 183,353,841	\$ 170,836,117
Contributions-Employee	1,282,379	503,550
Contributions-Service Transfers from Other System	1,784,382	1,727,834
Contributions-Other	978,184	635,900
Total Contributions	187,398,786	173,703,401
Investment Income from Investing Activities		
Net Appreciation in Fair Value of Investments	296,466,951	186,554,238
Interest and Dividends	42,844,252	32,892,138
Less: Investment Expenses	20,130,262	21,481,798
Net Investment Income	319,180,941	197,964,578
Income from Securities Lending Activities		
Securities Lending Gross Income	258,110	222,357
Less: Securities Lending Expenses (Income), net	(6,604)	47,497
Net Income from Securities Lending Activities	264,714	174,860
Other Income	125	1,650
NET ADDITIONS	506,844,566	371,844,489
<u>DEDUCTIONS:</u>		
Monthly Benefits	231,384,708	224,518,100
Administrative Expenses	3,736,355	2,997,225
TOTAL DEDUCTIONS	235,121,063	227,515,325
NET INCREASE	271,723,503	144,329,164
NET POSITION RESTRICTED FOR PENSIONS		
Beginning of Year	1,685,732,710	1,541,403,546
End of Year	<u>\$1,957,456,213</u>	<u>\$1,685,732,710</u>

See accompanying Notes to the Financial Statements.

Notes to the Financial Statements

For the Years Ended June 30, 2014 and 2013

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

As established under Section 104.020 of the Revised Statutes of Missouri (RSMo), the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (MPERS) is a body corporate and an instrumentality of the State of Missouri (State). Due to the nature of MPERS' reliance on funding from the Missouri Department of Transportation (MoDOT) and the Missouri State Highway Patrol (MSHP) and control of the overall plan document by the legislative and executive branches of state government, MPERS is considered a part of the State of Missouri financial reporting entity and is included in the State's financial reports as a component unit shown as a pension trust fund.

Note 1 (a) - Basis of Accounting

The financial statements were prepared using the accrual basis of accounting. Contributions are due to MPERS when employee services have been performed and paid. Contributions are recognized as revenues when due, pursuant to statutory requirements. Benefits are recognized when due and payable and expenses are recorded when the corresponding obligations are incurred. Dividend income is recognized when dividends are declared. Interest income is recognized when earned.

In June 2012, the Governmental Accounting Standards Board (GASB) approved new accounting and reporting standards for pensions provided by state and local governments. The new statements are GASB 67, Financial Reporting for Pension Plans and GASB 68, Accounting and Financial Reporting for Pensions. GASB 67 applies to MPERS and other state and local pension plans established as trusts, to be implemented in fiscal years beginning after June 15, 2013. GASB 68 applies to the employers that participate in MPERS as well as other governmental employers that sponsor or contribute to pension plans, to be implemented in fiscal years beginning after June 15, 2014. MPERS implemented both GASB 67 and GASB 68 in FY14.

The requirements for GASB 67 include changes in presentation of the financial statements, notes to the financial statements, and required supplementary information. Significant changes include an actuarial calculation of total and net pension liability. It also includes comprehensive footnote disclosure regarding the pension liability, the sensitivity of the net pension liability to the discount rate, and increased investment activity disclosures. The total pension liability, determined in accordance with GASB 67, is presented in Note 7 and in the Required Supplementary Information.

GASB 68 requires participating employers to recognize a liability for their proportionate share of the net pension liability. It also requires participating employers recognize pension expense and report deferred outflows and inflows of resources related to pensions for its proportionate shares of collective pension expense and collective deferred outflows and inflows or resources related to pensions. The employer proportionate share is discussed in Note 8.

Note 1 (b) - Method Used to Value Investments

Investments are reported at fair value on a trade date basis. Bonds and stocks traded on a national or international exchange are valued at the reported sales price at current exchange rates. Mortgages are valued on the basis of future principal and interest payments and are discounted at prevailing interest rates for similar instruments. The fair value of real estate and timber investments are based on net asset value estimates provided by the general partners' administrators or portfolio managers, which are compared to independent appraisals. Investments that do not have an established market are reported at estimated fair value. The fair value of the hedge fund (absolute return) and venture capital and partnership portfolios are based on valuations of the underlying companies as reported by the general partner or portfolio manager.

Note 1 (c) - Net Investment in Capital Assets

MPERS capitalizes assets with an expected useful life greater than one year and a cost greater than \$1,000. Capital assets are depreciated on the straight-line method over the estimated useful lives of the related assets. The estimated useful lives are as follows:

Furniture, Equipment and Software	3 – 10 years
Building and Improvements	30 years

Note 1 (d) - Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Notes to the Financial Statements

For the Years Ended June 30, 2014 and 2013

NOTE 2 – PLAN DESCRIPTIONS AND CONTRIBUTION INFORMATION

MPERS is a body corporate and an instrumentality of the state as a multiple-employer, public employee retirement system with one plan that has three benefit structures known as the Closed Plan, the Year 2000 Plan, and the Year 2000 Plan-2011 Tier. The plan provides retirement, survivor, and disability benefits for employees of MoDOT, MSHP, and MPERS' staff. The plan is administered in accordance with the requirements of a cost sharing, multiple-employer, public employee retirement plan under the Revised Statutes of Missouri. In MPERS are vested the powers and duties specified in sections 104.010 to 104.312, 104.601 to 104.805, and 104.1003 to 104.1093, RSMo., and such other powers as may be necessary or proper to enable it, its officers, employees, and agents to carry out fully and effectively all the purposes outlined pursuant to these sections. Responsibility for the operation and administration

of the System is vested in the Board of Trustees, which consists of eleven members, four elected by the active and retired plan members, three Highway and Transportation Commissioners, a State Senator appointed by the President Pro-Tem of the Senate, a State Representative appointed by the Speaker of the House, and the Director of the MoDOT and Superintendent of the MSHP who serve as ex-officio members. Detailed information regarding contributions can be found in Note 5.

Generally, all covered employees hired before July 1, 2000 are eligible for membership in the Closed Plan. All covered employees hired on or after July 1, 2000 and before January 1, 2011 are eligible for membership in the Year 2000 Plan. All covered employees hired on or after January 1, 2011 are eligible for membership in the Year 2000 Plan's 2011 Tier.

Membership in the Closed Plan, Year 2000 Plan, and 2011 Tier as of June 30

		2014		2014	2013
	Closed	Year 2000	2011 Tier	Total	Total
Retirees, Beneficiaries, and Disabilities					
Currently Receiving Benefits	5,116	3,322	0	8,438	8,326
Terminated Employees Entitled to					
But Not Yet Receiving Benefits	1,602	620	0	2,222	2,153
Active Employees					
Vested	3,371	2,606	0	5,977	6,018
Non-Vested	0	325	1,113	1,438	1,318
Total Membership	10,089	6,873	1,113	18,075	17,815

Closed Plan Description

Employees covered by the Closed Plan are fully vested for benefits upon receiving 5 years of creditable service. Under the Closed Plan, MoDOT and civilian employees may retire with full benefits upon the earliest of attaining:

- Age 65 with 4 or more years of creditable service (active);
- Age 65 with 5 or more years of creditable service (terminated & vested);
- Age 60 with 15 or more years of creditable service (active or terminated & vested); or
- "Rule of 80" – at least age 48 with sum of member's age and service equaling 80 or more (active or terminated & vested).

The following provisions apply for uniformed patrol

members of the Closed Plan:

- Age 55 with 4 or more years of creditable service (active);
- Age 55 with 5 or more years of creditable service (terminated & vested);
- "Rule of 80" – at least age 48 with sum of member's age and service equaling 80 or more (active or terminated & vested); or
- Mandatory retirement at age 60 (active).

All non-uniformed members may retire early, with reduced benefits, at age 55 with at least 10 years of creditable service.

The base benefit in the Closed Plan is equal to 1.6% multiplied by the final average pay multiplied by years of creditable service. For members of the uniformed patrol,

Notes to the Financial Statements

For the Years Ended June 30, 2014 and 2013

the base benefit is calculated by applying the same formula, then multiplying the product by 1.333333.

Retired uniformed members will receive an additional benefit of \$90 per month, plus cost-of-living adjustments (COLAs), until attainment of age 65. This payment, however, is reduced by any amount earned during gainful employment. This benefit is not available to uniformed members hired after January 1, 1995.

For members employed prior to August 28, 1997, COLAs are provided annually based on 80% of the increase in the consumer price index for all urban consumers for the United States (CPI-U). The minimum rate is 4% and the maximum rate is 5%, until the cumulative amount of COLAs equals 65% of the original benefit. Thereafter, the 4% minimum rate is eliminated and the annual COLA rate will be equal to 80% of the increase in the CPI-U (annual maximum of 5%). For members employed on or after August 28, 1997, COLAs are provided annually based on 80% of the increase in the CPI-U, up to a maximum rate of 5%.

The BackDROP is a payment option that is available to eligible members upon retirement. This option provides for a benefit to be calculated as if the member elected to retire at a previous date. If the BackDROP is elected, the monthly benefit payable on the actual retirement date is based on the benefit that would have been received by the member had he/she left employment and retired on the BackDROP date. In addition, the member will receive a lump sum payment equal to 90% of the life income annuity amount the member would have received during the BackDROP period. This lump sum amount includes any COLAs and other benefit increases; also, credit will be received for the unused sick leave balance as of the date of retirement.

The life income annuity payment option (which contains no provision for survivorship) and the life income with 60 or 120 month guaranteed payment options are available to all members. Joint and 50% or 100% survivor options are available if married at the time of retirement. In the Closed Plan, the reduction for the joint & 100% survivor option is based on the difference between the age of the member and the survivor. There is no reduction for the joint and 50% survivor option.

If a reduced joint and survivor option is chosen at the time of retirement and the spouse precedes the member in death, the benefit will revert back (pop-up) to a normal annuity.

Members may name a new spouse as beneficiary if:

- They were single at retirement and since married;
- They elected a spouse option at the time of retirement, the spouse preceded the member in death, and then a remarriage occurred.

The member has 1 year from the date of marriage to re-elect a payment option and name a new spouse.

All members who retire from active employment or long-term disability, or begin receiving normal or work-related disability benefits, on or after September 28, 1985, are provided a \$5,000 death benefit payable to designated beneficiaries.

Year 2000 Plan Description

Employees covered by the Year 2000 Plan are fully vested for benefits upon earning 5 years of creditable service. Under the Year 2000 Plan, MoDOT and civilian employees may retire with full benefits upon the earliest of attaining:

- Age 62 and with 5 or more years of creditable service (active or terminated & vested);
- "Rule of 80" – at least age 48 with sum of member's age and service equaling 80 or more (active).

The following provisions apply for uniformed patrol members of the Year 2000 Plan:

- "Rule of 80" – at least age 48 with sum of member's age and service equaling 80 or more (active);
- Mandatory retirement at age 60 with 5 or more years of creditable service (active only).

All members may retire early with reduced benefits at age 57 with at least 5 years of creditable service.

The base benefit in the Year 2000 Plan is equal to 1.7% multiplied by the final average pay multiplied by years of creditable service. Members retiring under the Rule of 80, and uniform patrol members retiring at the mandatory retirement age (currently 60) with 5 years of creditable service, receive an additional temporary benefit until age 62. The temporary benefit is equivalent to 0.8% multiplied by final average pay multiplied by years of creditable service.

COLAs are provided annually based on 80% of the increase in the CPI-U, up to a maximum rate of 5%.

The BackDROP is a payment option that may be available to members upon retirement. This option provides for a monthly benefit to be calculated as if the member elected to retire at a previous date. If the

Notes to the Financial Statements

For the Years Ended June 30, 2014 and 2013

BackDROP is elected, the monthly benefit payable on the actual retirement date is based on the benefit that would have been received by the member had he/she left employment and retired on the BackDROP date. In addition, the member will receive a lump sum payment equal to 90% of the life income annuity amount the member would have received during the BackDROP period. This lump sum amount includes any temporary benefits, COLAs and other benefit increases; also, credit will be received for the unused sick leave balance as of the date of retirement.

The life income annuity payment option (with no provision for survivorship) and the life income with 120 or 180 months guaranteed payment options are available to all members. Joint and 50% or 100% survivorship options are available if married at the time of retirement. The reduction for the joint and 50% or 100% survivor options is based on the member's age at retirement, as well as the age difference between the member and the survivor.

If a reduced joint and survivor option is chosen at the time of retirement and the spouse precedes the member in death, the benefit will revert back (pop-up) to a normal annuity.

Members may name a new spouse for survivor benefits if:

- They were single at retirement and since married;
- They elected a spouse option at the time of retirement, the spouse preceded the member in death, and then a remarriage occurred.

The member has 1 year from the date of marriage to re-elect the payment option and name a new spouse.

All members who retire from active employment or long-term disability, or begin receiving work-related disability benefits, on or after July 1, 2000, are provided a \$5,000 death benefit payable to designated beneficiaries.

Year 2000 Plan-2011 Tier Description

Employees covered by the 2011 Tier are fully vested for benefits upon earning 10 years of creditable service. Under the 2011 Tier, MoDOT and civilian employees may retire with full benefits upon the earliest of attaining:

- Age 67 and with 10 or more years of creditable service (active or terminated & vested);
- "Rule of 90" – at least age 55 with sum of member's age and service equaling 90 or more (active only).

Active MoDOT and civilian employees may retire early with reduced benefits at age 62 with at least 10 years of creditable service.

The following provisions apply for uniformed patrol members of the 2011 Tier:

- Age 55 and with 10 or more years of creditable service (active only);
- Mandatory retirement at age 60 with no minimum service amount (active only).

Terminated and vested uniformed patrol employees may retire at age 67 with 10 or more years of creditable service.

The base benefit in the 2011 Tier is equal to 1.7% multiplied by the final average pay multiplied by years of creditable service. Members retiring under the Rule of 90, and uniform patrol members retiring at the mandatory retirement age (currently 60) or at age 55 with 10 years of creditable service, receive an additional temporary benefit until age 62. The temporary benefit is equivalent to 0.8% multiplied by final average pay multiplied by years of creditable service.

COLAs are provided annually based on 80% of the change in the CPI-U, up to a maximum rate of 5%.

The life income annuity payment option (with no provision for survivorship) and the life income with 120 or 180 months guaranteed payment options are available to all members. Joint and 50% or 100% survivorship options are available if married at the time of retirement. The reduction for the joint and 50% or 100% survivor options is based on the member's age at retirement, as well as the age difference between the member and the survivor.

If a reduced joint and survivor option is chosen at the time of retirement and the spouse precedes the member in death, the benefit will revert back (pop-up) to a normal annuity.

Members may name a new spouse for survivor benefits if:

- They were single at retirement and since married;
- They elected a spouse option at the time of retirement, the spouse preceded the member in death, and then a remarriage occurred.

The member has 1 year from the date of marriage to re-elect the payment option and name a new spouse.

Notes to the Financial Statements

For the Years Ended June 30, 2014 and 2013

All members who retire from active employment or long-term disability, or begin receiving work-related disability benefits, on or after January 1, 2011, are provided a \$5,000 death benefit payable to designated beneficiaries.

Contributions

Beginning January 1, 2011, employee contributions of 4% of gross pay are required for those covered by the Year 2000 Plan-2011 Tier.

Employer contributions are determined through annual actuarial valuations. Administrative expenses

are financed through contributions from participating employers and investment earnings.

Participating employers are required to make contributions to the plan based on the actuarially determined rate. Prior to August 13, 1976, contributions by all plan members were required. Accumulated employee contributions made prior to that time, plus interest, were refunded to applicable members. Maximum contribution rates were eliminated August 13, 1976. Detailed information regarding contributions can be found in Note 5.

Schedule of Funded Status and Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Percent Funded (a/b)	Annual Covered Payroll (c)	UAAL Percentage of Covered Payroll ((b-a)/c)
6/30/2014	\$1,795,264,291	\$3,650,241,741	\$1,854,977,450	49.18%	\$336,590,797	551.11%

The schedules of funding progress, presented as required supplementary information (RSI) following the Notes to the Financial Statements, present multiyear

trend information about whether the actuarial values of plan assets are increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

Additional Information as of the June 30, 2014 Actuarial Valuation follows:

Valuation Date	6/30/2014
Actuarial Cost Method	Entry Age
Amortization Method	Closed, Level Percent of Payroll
Remaining Amortization Period	17 Years*
Asset Valuation Method	3-Year Smoothing
Actuarial Assumptions:	
Investment Rate of Return	7.75%
Projected Salary Increases	3.5% to 11%
COLAs	2.4% Compound
Price Inflation	3.0%

*single equivalent period

Notes to the Financial Statements

For the Years Ended June 30, 2014 and 2013

NOTE 3 – DEPOSITS AND INVESTMENTS

The Board of Trustees has established policies and procedures by which funds are invested by bank custodians and investment managers. Section 104.150, RSMo, provides the authority for the board to invest MPERS funds. Plan assets are invested in a diversified portfolio following prudent standards for preservation of capital, with the goal of achieving the highest possible rate of return consistent with MPERS' tolerance for risk. The Board of Trustees establishes MPERS' policy in regard to the allocation of invested assets, and may amend the policy. The following is MPERS current asset allocation policy:

Asset Class	Target Allocation
Global Equity	30%
Private Equity	15%
Fixed Income	25%
Real Assets	5%
Real Estate	10%
Hedge Funds	15%
Cash	0%

Note 3 (a) - Deposit and Investment Risk Policies **Concentration of Credit Risk**

Concentration of credit risk is the risk of loss attributed to the magnitude of the System's investment in a single issuer. Within the traditional asset classes (equities and fixed income), the consultant will aggregate exposures across asset classes to create measures of concentration including industries, countries and security issuer for Investment staff review.

Investment Custodial Credit Risk

Custodial credit risk is an investment risk in that, in the event of the failure of the counterparty to a transaction, the System will not be able to recover the value of its investment or the collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the System, and are held by either: a) the counterparty or b) the counterparty's trust department or agent but not in the System's name. It is the policy of the System to require that all investments be clearly marked as to ownership and, to the extent possible, shall be registered in the name of the System.

Cash Deposit Custodial Credit Risk

Cash deposit custodial credit risk is the risk that, in the event of the failure of depository financial institution, the System will not be able to recover deposits or will

not be able to recover collateral securities that are in the possession of an outside party. Missouri state law requires that all public funds must be collateralized with acceptable securities having market values of at least 100% of the amount of funds on deposit (less any amount covered by FDIC insurance).

Market Risk

Market risk is the risk that the fair value of an investment will be adversely impacted due to a change in value of the underlying market. The three primary market risks prevalent in the System's investment portfolio are equity prices, interest rates, and foreign currencies. Equity risk is the risk that stock prices fall and/or the volatility in the equity market increases. Interest rate risk is the risk that fixed income securities (or any investment primarily valued on a yield basis) will drop in value due to an increase in interest rates. Currency risk is the risk that changes to foreign exchange rates will adversely impact the fair value of non-U.S. Dollar denominated assets. The System protects the portfolio against market risks by adopting a diversified asset allocation that limits the amount of exposure to each underlying market risk. Market risks are also controlled by monitoring the types, amounts, and degree of risk that each investment manager takes for their specific mandate.

Investment Credit Risk

Investment credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. Unless authorized under a separate Investment Management Agreement or operating agreement, it is the policy of the System to limit fixed income managers to purchasing securities that possess a minimum credit rating of "Baa" by Moody's and "BBB" by Standard & Poor's. Issues subsequently downgraded below these ratings must be brought to the attention of the Chief Investment Officer. Where counterparty risk is present, the System's investment managers seek to control credit risk through counterparty credit evaluations and approvals, counterparty credit limits and exposure monitoring procedures.

Note 3 (b) - Cash Deposits

Cash balances include short-term securities held by the custodial bank to meet future obligations and operating balances held by the depository bank. As of June 30, 2014 and 2013, MPERS had carrying amount of deposits of (\$38,925) and (\$410,524), respectively, and a bank balance of \$2 and \$4, respectively. The FDIC covered the bank balances. To maximize investment income,

Notes to the Financial Statements

For the Years Ended June 30, 2014 and 2013

cash is invested in overnight repurchase agreements, thus causing the negative cash amounts disclosed. The balances in these repurchase agreements at June 30, 2014 and 2013 were \$233,061 and \$504,870, respectively. As of June 30, 2014 and 2013, no investments were held as repurchase agreements that were uninsured or unregistered, with securities held by the counterparty or by its trust department or agent but not in MPERS' name.

Note 3 (c) – Concentrations

No investments in any one organization (other than those issued or sponsored by the U.S. government and those in pooled investments) represent 5% of plan net position.

Note 3 (d) – Rate of Return

For the year ended June 30, 2014, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 17.58%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Note 3 (e) – Investments

The following table shows MPERS' investments by type.

Summary of Investments by Type at June 30

	2014		2013	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Government Obligations	\$ 141,084,282	\$ 145,598,291	\$ 117,944,807	\$ 119,241,225
Corporate Bonds	31,435,313	32,651,714	30,914,319	30,906,710
Stock and Rights/Warrants	416,551,454	595,943,370	403,933,256	538,614,992
Real Estate	178,784,181	203,400,219	170,548,899	178,171,999
Mortgages & Asset-Backed Securities	162,913,148	176,678,785	119,446,304	125,215,805
Hedge Funds (Absolute Return)	160,996,066	204,257,912	137,715,038	173,502,695
Tactical Fixed Income	0	0	5,353,448	7,974,681
Limited Partnerships	442,844,448	539,413,897	402,814,997	439,925,515
Short-Term Investments	39,999,208	39,999,208	38,573,512	38,573,512
Securities Lending Collateral	86,192,337	86,192,337	92,327,975	92,327,975
Total Investments	\$1,660,800,437	2,024,135,733	\$1,519,572,555	1,744,455,109

Reconciliation to Statement of Fiduciary Net Position:

Less: Repurchase Agreements	(233,061)	(504,870)
Less: Securities Lending Collateral	(86,192,337)	(92,327,975)
Investments per Statement of Fiduciary Net Position	\$1,937,710,335	\$1,651,622,264

Certain investments are not listed on national exchanges, over-the-counter markets, nor do they have quoted market prices. Their valuation is based on the most current net asset values, activities through year-end, independent appraisals and/or good faith estimates of the investments fair value provided by the general partner or portfolio manager. The estimated fair value of these investments may differ significantly from values that would have been used had a ready market existed. The following investments were priced using those

methods and comprised 49% of the total fair value of the System's investments as of June 30, 2014:

Real Estate	\$203,400,219
Hedge Funds (Absolute Return)	204,257,912
Limited Partnerships	539,413,897
	\$947,072,028

Notes to the Financial Statements

For the Years Ended June 30, 2014 and 2013

Note 3 (f) – Investment Interest Rate Risk

The following table summarizes the maturities of government obligations, corporate bonds, convertible corporate bonds, mortgages, asset-backed

securities, and tactical fixed income which are exposed to interest rate risk.

Summary of Weighted Average Maturities

Investment Type	Fair Value	Investment Maturities (in years) as of 6/30/2014			
		Less than 1	1 - 5	6 - 10	More than 10
Asset-Backed Securities	\$ 14,628,942	\$0	\$ 2,502,255	\$ 6,347,523	\$ 5,779,164
Commercial Mortgage-Backed Securities	74,196,699	0	2,619,370	0	71,577,329
Corporate Bonds	21,168,837	0	5,189,747	777,546	15,201,544
Government Agencies	48,880,419	0	1,909,854	8,104,094	38,866,471
Government Bonds	4,858,124	0	0	0	4,858,124
Government Mortgage-Backed Securities	66,727,156	0	9,083,320	218,990	57,424,846
Government-issued Commercial Mortgage-Backed	10,567,306	0	4,356,581	0	6,210,725
Index Linked Govt Bonds	24,248,914	0	0	16,433,078	7,815,836
Municipal/Provincial Bonds	67,610,834	0	2,004,940	8,407,827	57,198,067
Non-Govt Backed C.M.O.s	10,558,682	0	0	0	10,558,682
Total	\$343,445,913	\$0	\$27,666,067	\$40,289,058	\$275,490,788
Pooled Investments	11,482,877				
Grand Total	\$354,928,790				

Notes to the Financial Statements

For the Years Ended June 30, 2014 and 2013

Note 3 (g) – Investment Credit Ratings

The following table summarizes the credit ratings of the government obligations, corporate bonds, mortgages and asset-backed securities, and tactical fixed income on the Statement of Fiduciary Net Position.

Summary of Credit Ratings

Investment Type	Quality Rating	6/30/2014 Fair Value	6/30/2013 Fair Value
Asset-Backed Securities	AAA	\$ 3,748,513	\$ 3,946,068
Asset-Backed Securities	AA	9,589,678	15,160,005
Asset-Backed Securities	A	0	0
Asset-Backed Securities	CC	1,143,616	0
Asset-Backed Securities	not rated	147,135	475,274
Commercial Mortgage-Backed Securities	AAA	2,599,704	3,702,411
Commercial Mortgage-Backed Securities	A	5,158,445	3,888,478
Commercial Mortgage-Backed Securities	BBB	6,901,704	9,105,964
Commercial Mortgage-Backed Securities	BB	363,707	361,805
Commercial Mortgage-Backed Securities	B	15,814,022	19,236,831
Commercial Mortgage-Backed Securities	CCC	11,115,641	6,668,218
Commercial Mortgage-Backed Securities	D	3,976,088	2,643,228
Commercial Mortgage-Backed Securities	not rated	28,267,388	12,605,970
Corporate Bonds	AA	5,293,652	3,302,911
Corporate Bonds	A	250,710	250,638
Corporate Bonds	BBB	1,132,590	1,905,928
Corporate Bonds	BB	0	601,269
Corporate Bonds	not rated	14,491,885	13,845,945
Government Agencies	AA	47,460,435	25,762,583
Government Agencies	us gov guar	1,419,984	550,115
Government Bonds	us gov guar	4,858,124	8,617,951
Government Mortgage-Backed Securities	not rated	5,707,688	0
Government Mortgage-Backed Securities	us gov guar	61,019,468	27,534,467
Govt issue Commercial Mortgage-Backed Securities	not rated	2,359,211	0
Govt issue Commercial Mortgage-Backed Securities	us gov guar	8,208,095	5,623,704
Index Linked Government Bonds	us gov guar	24,248,914	34,185,870
Municipal/Provincial Bonds	AAA	16,927,158	11,198,788
Municipal/Provincial Bonds	AA	42,072,533	30,517,833
Municipal/Provincial Bonds	A	420,707	379,762
Municipal/Provincial Bonds	not rated	8,190,436	8,028,322
Non-Government Backed C.M.O.s	AAA	0	427,513
Non-Government Backed C.M.O.s	AA	1,569,219	2,033,703
Non-Government Backed C.M.O.s	A	1,192,862	1,871,664
Non-Government Backed C.M.O.s	BB	278,359	638,396
Non-Government Backed C.M.O.s	B	118,456	134,070
Non-Government Backed C.M.O.s	CCC	422,795	481,830
Non-Government Backed C.M.O.s	CC	89,547	101,820
Non-Government Backed C.M.O.s	D	803,114	1,116,817
Non-Government Backed C.M.O.s	not rated	6,084,330	7,457,569
Pooled Investments	not rated	11,482,877	19,637,070
Total		\$354,928,790	\$284,000,790

Notes to the Financial Statements

For the Years Ended June 30, 2014 and 2013

Note 3 (h) – Investment Foreign Currency Risk

Exposure to Foreign Currency Risk as of June 30

Foreign Currency	Cash and Equivalents	Equities	Real Estate/ Partnerships	6/30/2014 Total	6/30/2013 Total
Australian Dollar	\$ 0	\$ 1,560,255	\$ 0	\$ 1,560,255	\$ 1,467,212
British Pound Sterling	0	1,405,812	4,378,916	5,784,728	726,673
Canadian Dollar	0	0	0	0	6
Euro	1,299,151	2,550,487	19,236,358	23,085,996	18,072,945
Hong Kong Dollar	0	0	0	0	1,087,805
Japanese Yen	0	1,801,689	0	1,801,689	1,543,471
Singapore Dollar	0	395,460	0	395,460	1,025,322
Swiss Franc	0	0	0	0	432
Total Exposure Risk	\$1,299,151	\$7,713,703	\$23,615,274	\$32,628,128	\$23,923,866

Note 3 (i) – Securities Lending

In accordance with the Board of Trustees' investment policy, MPERS participates in a securities lending program. The Northern Trust Company administers the program. There are no restrictions on the amount of securities that may be lent.

Securities that may be loaned include U.S. government and agency securities, corporate equity, and fixed income securities. Collateral may include cash, U.S. government securities and irrevocable letters of credit. U.S. securities are loaned in exchange for collateral valued at 102% of the market value of the securities, plus any accrued interest. Non-U.S. securities are loaned in exchange for collateral valued at 105% of the market value of the securities, plus any accrued interest. On June 30, 2014 and 2013, MPERS had no credit risk exposure to borrowers, since the amount of collateral exceeded the amount of the loans.

Non-cash collateral cannot be pledged or sold unless the borrower defaults. The average term of the System's loans was approximately 95 days and 68 days, as of June 30, 2014 and June 30, 2013, respectively. Cash open collateral is invested in a short-term investment pool, which had an interest sensitivity of 37 days and

43 days, as of June 30, 2014 and June 30, 2013, respectively. Cash collateral may also be invested separately in "term loans", in which case the investments match the loan term. These loans can be terminated on demand by either lender or borrower. There were no known violations of legal or contractual provisions, or borrower or lending agent default losses. There were no dividends or coupon payments owing on the securities lent. Securities lending earnings are credited on approximately the fifteenth day of the following month.

Indemnification deals with a situation in which a client's securities would not be returned due to the insolvency of a borrower and Northern Trust would fail to live up to its contractual responsibilities relating to the lending of those securities. Northern Trust's responsibilities include performing appropriate borrower and collateral investment credit analyses and demanding adequate types and levels of collateral.

The collateral held (including both cash collateral recognized in the Statement of Fiduciary Net Position and non-cash collateral) was as follows at June 30:

Collateral Held

Investment Type	2014	2013
Equities	\$68,070,631	\$82,736,400
Government & government sponsored securities	6,483,650	8,787,747
Corporate bonds	1,054,724	2,690,980
	\$75,609,005	\$94,215,127

Notes to the Financial Statements

For the Years Ended June 30, 2014 and 2013

Note 3 (j) – Derivatives

A derivative financial instrument is an investment whose value depends on the values of one or more underlying assets, financial indexes, or commodity prices. These investments include futures contracts, options contracts, and forward foreign currency exchange. Derivative financial instruments involve credit risk and market risk, as described in Note 3 (a), in varying levels. The notional value related to these derivative instruments are generally not recorded on the financial statements;

however, the change in market value of these instruments is incorporated in performance. The notional/market value of \$20,184,080 and \$9,013,164 for the various contracts in MPERS' portfolio as of June 30, 2014 and 2013, respectively, is recorded in investments on the Statement of Fiduciary Net Position. The change in fair value of \$20,184,080 and \$9,401,640 for the years ended June 30, 2014 and 2013, respectively, is recorded in investment income on the Statement of Changes in Fiduciary Net Position.

Investment Derivatives as of June 30, 2014

Type	Classification	Notional/ Market Value	Cost	Unrealized Gain (Loss)
Futures Contracts	Investments, at fair value	\$ 20,184,080	\$0	\$ 20,184,080
		\$20,184,080	\$0	\$20,184,080

Investment Derivatives as of June 30, 2013

Type	Classification	Notional/ Market Value	Cost	Unrealized Gain (Loss)
Futures Contracts	Investments, at fair value	\$ 9,675,765	\$ 0	\$ 9,675,765
Swap Contracts	Investments, at fair value	(662,370)	0	(662,370)
Options Contracts	Investments, at fair value	0	(388,476)	388,476
Foreign Currency Forward Contracts	Investments, at fair value	(231)	0	(\$231)
		\$9,013,164	(\$388,476)	\$9,401,640

Notes to the Financial Statements

For the Years Ended June 30, 2014 and 2013

NOTE 4 – RECEIVABLES

Receivables at June 30 consisted of the following:

Receivables

Type	2014	2013
Contributions-MoDOT	\$4,796,972	\$4,472,323
Contributions-MSHP Non-Uniformed	1,013,551	921,997
Contributions-MSHP Uniformed	1,754,607	1,677,475
Contributions-Retirement System	140,542	22,695
Commission Recapture	2,796	2,716
Securities Lending	15,710	19,017
Investment Interest & Income	7,241,176	3,587,888
Investment Sales	97,323	28,354,363
	\$15,062,677	\$39,058,474

NOTE 5 – CONTRIBUTIONS

MoDOT, the Highway Patrol, and MPERS make contributions to the System, as well as employees covered under the Year 2000 Plan-2011 Tier. MPERS' permanent funding policy provides for actuarially determined employer contributions using the entry-age normal cost method on a closed group basis (consisting of normal cost and amortization of any unfunded accrued liabilities over a 30-year period, beginning July 1, 2006). (The objective is to reduce the period by one year each year.) A temporary accelerated policy has been adopted where the total contribution is based on entry-age normal cost plus a 15-year amortization period for unfunded retiree liabilities and a 30-year amortization period for other unfunded liabilities. Both amortization periods are closed periods starting July 1, 2010. This temporary accelerated policy was adopted by the MPERS' Board of Trustees on September 17, 2009 and will remain in effect until such time as the retiree liability becomes 100% funded or the permanent policy produces a higher contribution rate. Actuarially

determined rates, expressed as percentages of annual covered payroll, provide for amounts sufficient to fund those benefits designated by state statute to be funded in advance. Actuarial assumptions used to compute contribution requirements are the same as those used to compute the pension benefit obligation. The employee contribution rate for members of the Year 2000 Plan-2011 Tier is set by statute.

Required employer contributions totaling \$183,353,841 and \$170,836,117 for fiscal years 2014 and 2013, respectively, represent funding of normal costs and amortization of the unfunded accrued liability. Actual contributions made were 100% of required contributions. Contribution rates as determined by the System's actuary for the years ended June 30, 2014 and 2013 are shown in the following table. The Board established actual rates to be the same as the actuarially determined rates.

Contribution Rates

MoDOT, MPERS & Civilian Patrol	2014		MoDOT, MPERS & Civilian Patrol	2013	
	Uniformed Patrol	2011 Tier Employee		Uniformed Patrol	2011 Tier Employee
54.25%	55.23%	4.00%	50.92%	55.03%	4.00%

Notes to the Financial Statements

For the Years Ended June 30, 2014 and 2013

NOTE 6 – DEFERRED RETIREMENT OPTION PROGRAM

MPERS currently provides a BackDROP option. This is an election made at the time of actual retirement. In effect, it provides members an option to elect to receive a portion of their benefits as cash. Since the election is

not made until the member actually retires, the option is not treated as a DROP provision as defined by generally accepted accounting principles.

NOTE 7 – NET PENSION LIABILITY OF EMPLOYERS

The components of the net pension liability of the employers at June 30, 2014, were as follows:

Total pension liability	\$3,650,241,741
Plan fiduciary net position	(1,957,456,213)
Employers' net pension liability	<u>\$1,692,785,528</u>

Plan fiduciary net position as a percentage of the total pension liability 53.63%

Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of June 30, 2014, using the following actuarial assumptions, applied to all prior periods included in the measurement:

Inflation	3.0%
Salary Increases	3.5% to 11%
Investment Rate of Return	7.75%

The mortality tables, for post-retirement mortality, used in evaluating allowances to be paid to non-disabled pensioners were the R-P 2000 Combined Healthy Mortality Tables projected 16 years and set back 1 year for males and females. Pre-retirement mortality used was 70% for males and 50% for females of the post-retirement tables set back 1 year for males and set back 1 year for females. Disabled pension mortality was based on PBGC Disabled mortality tables. The healthy mortality tables include a margin for mortality improvement. The margin is in the 16-year projection. The disabled mortality tables do not include a margin for mortality improvement.

The actuarial assumptions used in the June 30, 2014 valuation were based on the results of an actuarial experience study for the period July 1, 2007 – June 30, 2012.

The long-term (30 year) expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns,

net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return were adopted by the plan's trustees after considering input from the plan's investment consultant(s) and actuary(s). These estimates for each major asset class included in MPERS' target asset allocation as of June 30, 2013 (see NOTE 3) are summarized in the following table:

Asset Class	Long-Term Expected Real Rate of Return
Global Equity	5.05%
Private Equity	6.75%
Fixed Income	0.59%
Real Assets	4.75%
Real Estate	2.75%
Hedge Funds	3.25%

Discount Rate

A single discount rate of 7.75% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 7.75%. The projection of cash flows used to determine this single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Regarding the sensitivity of the net pension liability to changes in the single discount rate, the following

Notes to the Financial Statements

For the Years Ended June 30, 2014 and 2013

presents the plan's net pension liability, calculated using a single discount rate of 7.75%, as well as what the plan's net pension liability would be if it were calculated

using a single discount rate that is 1-percentage-point lower or 1-percentage-point higher:

Current Single Discount

	1% Decrease 6.75%	Rate Assumption 7.75%	1% Increase 8.75%
Net Pension Liability	\$2,147,696,770	\$1,712,973,102	\$1,350,461,630

NOTE 8 – EMPLOYER PROPORTIONATE SHARE

MPERS, as the administrative agent for the pension system, is also an employer of the pension system. The administrative expenses of the pension system are included in the deductions to the pension system's fiduciary net position. While the employer contributions of the other participating employers are funded from outside revenue sources, the employer contributions of MPERS are funded from sources already recognized as revenues, such as earnings on plan investments or contributions paid by the other participating employers. Attempting

to allocate a portion of the net pension liability to MPERS as an employer would result in an allocation of the net pension liability to the other participating employers. Accordingly, MPERS will exclude its contributions from the employer proportionate share calculation for the reporting of a net pension liability, by assigning itself a proportionate share of 0%. This exclusion in essence shifts the portion of the net pension liability that would accrue to MPERS to the other participating employers.

NOTE 9 – PERSONAL SERVICES AND RETIREMENT PLAN

MPERS employed 17 full-time employees on June 30, 2014 and 15 on June 30, 2013. Six former MPERS employees have retired. Full-time employees are also members of the System. For these employees, MPERS accrued 54.25% of payroll during FY14, amounting to \$739,002, which was equal to the required contribution.

The net obligations for FY14 and the two preceding years are shown below. These amounts are recorded as both a contribution and administrative expense. Information regarding the retirement plans can be found in Notes 2 and 5.

Net Obligations

Year Ended June 30	Annual Required Contribution Percent	Dollars	Percent Contributed	Net Obligation
2012 ⁽²⁾	45.45% ⁽¹⁾	435,074	100%	\$0
2013	50.92% ⁽¹⁾	562,535	100%	\$0
2014	54.25% ⁽¹⁾	739,002	100%	\$0

(1) The Annual Required Contribution rate is equal to the Actuarially Required Contribution rate.

(2) New assumptions and/or methods adopted.

Notes to the Financial Statements

For the Years Ended June 30, 2014 and 2013

NOTE 10 – OTHER POST-EMPLOYMENT BENEFITS (OPEB)

In addition to the retirement benefits described previously, MPERS provides a portion of health care insurance through the MoDOT and MSHP Medical and Life Insurance Plan (Insurance Plan) in accordance with Missouri State statutes. For the purpose of reporting OPEB costs and obligations in accordance with Governmental Accounting Standards Board (GASB) Statement 45, the Insurance Plan is considered an agent multiple-employer defined benefit plan administered by MoDOT. Medical insurance benefits are established by the Insurance Plan's Board of Trustees and are approved by the Missouri Highways and Transportation Commission. Benefits include general inpatient and outpatient medical services; mental, nervous and substance abuse care; and prescriptions. Eligible members are employees who retired from the System with a minimum of 5 years of service and who participate in the Insurance Plan. MoDOT issues a publicly available financial report that includes financial statements and required supplementary information for the Insurance Plan. Requests for this report should be addressed to MoDOT, Controller's Division, P.O. Box 270, Jefferson City, MO 65102.

Employer and member contributions are established by the Insurance Plan's Board of Trustees and are approved by the Missouri Highways and Transportation

Commission. Premiums vary by coverage categories, which include retirees, certain disabled employees, spouses, certain dependents, and survivors of deceased employees and retirees. Member and employer required contribution rates average approximately 31.1% and 68.9%, respectively. The Insurance Plan is financed on a pay-as-you-go basis and is an internal service fund of MoDOT.

MoDOT's actuarial valuations for the Insurance Plan are performed biennially. The July 1, 2013 actuarial valuation was used for the FY14 financial statements and the July 1, 2011 actuarial valuation was used for the FY13 financial statements. For these periods, the annual required contribution (ARC) is equal to the annual OPEB cost. MPERS contributed \$33,958 in FY14 and \$26,739 in FY13 (33.3% and 22.1% of the ARC respectively), including implicit rate subsidies. Although funding is not related to payroll amounts, an equivalent Annual Required Contribution (ARC) rate would be 8.47% and 11.51% of annual covered payroll of \$1,203,673 and \$1,052,979 for FY14 and FY13, respectively. MPERS' share of the net OPEB obligation was \$599,399 and \$554,370 at June 30, 2014 and 2013, respectively. MPERS' share of the changes in the Insurance Plan's net OPEB obligation is shown as follows:

OPEB Cost and Obligation for the Year Ended June 30,

Type	2014	2013
Normal Cost	\$31,597	\$60,443
Amortization Payment	50,392	61,594
Interest	28,637	26,188
Adjustment to ARC	(32,572)	(27,022)
Annual OPEB Cost	78,054	121,203
Contributions	(33,025)	(26,739)
Increase in Net OPEB Obligation	45,029	94,464
Net OPEB Obligation - Beginning of Year	554,370	459,906
Net OPEB Obligation - End of Year	\$599,399	\$554,370

Because the Insurance Plan is an internal service fund of MoDOT, the Insurance Plan's assets have not been set aside. Because of this, there is no actuarial value of assets, so the entire actuarial accrued liability (AAL) is unfunded. Based on an actuarial report dated

July 1, 2013, MPERS' portion of the AAL is \$857,676, which is equal to MPERS' portion of the unfunded actuarial accrued liability (UAAL), as shown on the following table.

Notes to the Financial Statements

For the Years Ended June 30, 2014 and 2013

Actuarial Accrued Liability

Actuarial Accrued Liability	\$857,676
Actuarial Value of Assets	0
Unfunded Actuarial Accrued Liability (UAAL)	<u>\$857,676</u>
Funded Ratio (Actuarial Value of Plan Assets/AAL)	0%
Covered Payroll	\$1,203,673
UAAL as a Percentage of Covered Payroll	71%

Actuarial valuations of an ongoing plan reflect long-term perspective and involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. These calculations are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future. A schedule of funding progress is presented as required supplementary information following the notes to the financial statements. As allowed by the GASB, this reporting requirement is being implemented prospectively. Data is not available for prior years. Over time, the schedule of funding progress will present trend information about whether the actuarial value of plan assets is increasing or decreasing relative to the AAL for benefits.

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employers and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employers and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations. The actuarial methods and assumptions utilized in the valuation are shown on the following table.

Actuarial Methods and Assumptions

Actuarial Cost Method	Projected Unit Credit
UAAL Amortization Method	Level Dollar Amount
UAAL Amortization Period	30 Years
UAAL Amortization Approach	Open
Investment Return (Discount) Rate	4.5%
Healthcare Cost Trend Rate	8%, Decreasing to 5% After 2017
Admin Expense Trend (Inflation) Rate	4.0%

Notes to the Financial Statements

For the Years Ended June 30, 2014 and 2013

NOTE 11 – CAPITAL ASSETS

Summary of Changes in Capital Assets

	6/30/2013 Balance	Additions	Deletions/ Retirements	6/30/2014 Balance
Land	\$ 84,000	\$ 0	\$0	\$ 84,000
Buildings	581,619	0	0	581,619
Furniture, Equipment and Software	3,479,053	27,375	0	3,506,428
Less: Accumulated Depreciation	(1,517,469)	(370,617)	0	(1,888,086)
Total	\$2,627,203	(\$343,242)	\$0	\$2,283,961

	6/30/2012 Balance	Additions	Deletions/ Retirements	6/30/2013 Balance
Land	\$ 84,000	\$ 0	\$0	\$ 84,000
Buildings	581,619	0	0	581,619
Furniture, Equipment and Software	3,423,799	85,534	(30,280)	3,479,053
Less: Accumulated Depreciation	(1,174,573)	(373,176)	30,280	(1,517,469)
Total	\$2,914,845	(\$287,642)	\$0	\$2,627,203

NOTE 12 – OPERATING LEASES

As of June 30, 2014, MPERS is committed to three equipment and services related leases. The leases extend through August 2018. Expenditures for the years

ended June 30, 2014 and 2013 amounted to \$11,802 and \$11,284, respectively.

Future Minimum Lease Payments

Year Ending June 30

2015	\$ 8,736
2016	8,736
2017	8,736
2018	6,044
2019	110
Total minimum lease payments	<u>\$32,362</u>

Notes to the Financial Statements

For the Years Ended June 30, 2014 and 2013

NOTE 13 – RISK MANAGEMENT

MPERS is exposed to various risks of loss related to natural disasters, asset theft or damage, errors and omissions, torts, and employee injuries.

MPERS has purchased commercial insurance related to capital asset loss and damage. Ancillary coverage provided through the property policy includes coverage for accounts receivable, loss of money and securities, employee dishonesty, and forgery and alterations. MPERS carries a \$2 million umbrella liability policy. MPERS has coverage through Missouri Highway and Transportation Commission's Self-Insurance Fund related to workers'

compensation. MPERS' has also purchased an executive risk insurance package that includes directors and officers liability (\$1 million aggregate coverage), employment practices liability (\$1 million aggregate coverage) and fiduciary liability coverage (\$5 million aggregate coverage). These coverages are inclusive of legal defense costs and each policy carries a \$25,000 deductible. The State's Legal Expense Fund covers all state employees and officers, and MPERS has purchased surety bonds for the executive director and staff. Settlements have not exceeded coverages for each of the past three fiscal years.

NOTE 14 – COMMITMENTS

As of June 30, 2014, MPERS has \$227,477,367 unfunded commitments in alternative investments.

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF THE EMPLOYERS' NET PENSION LIABILITY

As of June 30,

	2014	2013
Total Pension Liability	3,650,241,741	3,583,975,559
Plan Fiduciary Net Position	1,957,456,213	1,685,732,710
Employers' Net Pension Liability	\$1,692,785,528	1,898,242,849
Plan Fiduciary Net Position as a % of Total Pension Liability	53.63%	47.04%
Covered Employee Payroll	336,590,797	323,205,767
Employers' Net Pension Liability as a % of Employee Covered Payroll	502.92%	587.32%

SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY

Year ended June 30,

	2014	2013
Total Pension Liability		
Service Cost	\$ 47,616,457	\$ 47,434,823
Interest on the Total Pension Liability	270,491,630	265,339,848
Difference Between Expected and Actual experience	(16,703,495)	(13,690,794)
Assumption Change	-	204,396,180
Benefit Payments	(227,958,108)	(220,623,394)
Refunds	(18,686)	(29,300)
Disability Premiums	(1,531,578)	(1,512,685)
Administrative Expense	(3,753,702)	(2,988,544)
Transfers to Other Retirement Systems	(1,876,336)	(629,246)
Net Change in Total Pension Liability	66,266,182	277,696,888
Total Pension Liability - Beginning	3,583,975,559	3,306,278,671
Total Pension Liability - Ending (a)	\$3,650,241,741	\$3,583,975,559
Plan Fiduciary Net Position		
Contributions - Employer	\$ 183,353,841	\$ 170,836,117
Contributions - Employee	2,260,563	1,139,450
Pension Plan Net Investment Income	319,445,780	198,141,088
Benefit Payments	(227,958,108)	(220,619,035)
Refunds	(18,686)	(29,300)
Disability Premiums	(1,531,578)	(1,512,685)
Pension Plan Administrative Expense	(3,736,355)	(2,997,225)
Net Transfers	(91,954)	(629,246)
Net Change in Plan Fiduciary Net Position	271,723,503	144,329,164
Plan Fiduciary Net Position - Beginning	1,685,732,710	1,541,403,546
Plan Fiduciary Net Position - Ending (b)	\$1,957,456,213	\$1,685,732,710
Employers' Net Pension Liability - Ending (a) - (b)	\$1,692,785,528	\$1,898,242,849

Note: These schedules are intended to present information for 10 years, but may be built prospectively. Additional years will be displayed as they become available.

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF EMPLOYERS CONTRIBUTIONS

Last 10 Fiscal Years

	Actuarially Determined Contributions	Actual Contributions	Contribution Deficiency (Excess)	Covered Employee Payroll	Contributions as a Percentage of Employee Covered Payroll
2014	\$183,353,841	\$183,353,841	\$0	\$336,799,855	54.44%
2013	170,836,117	170,836,117	0	329,863,134	51.79%
2012	164,884,467	164,884,467	0	344,514,139	47.86%
2011	149,952,750	149,952,750	0	363,345,651	41.27%
2010	124,052,534	124,052,534	0	376,258,823	32.97%
2009	122,613,975	122,613,975	0	379,140,306	32.34%
2008	123,323,265	123,323,265	0	375,527,604	32.84%
2007	121,243,361	121,243,361	0	372,140,457	32.58%
2006	111,271,679	111,271,679	0	343,113,410	32.43%
2005	102,240,145	102,240,145	0	335,543,633	30.47%

SCHEDULE OF INVESTMENT RETURNS

Last 10 Fiscal Years

Fiscal Year Ended June 30	Annual Money-Weighted Rate of Return
2005	10.98%
2006	14.95%
2007	18.09%
2008	-2.41%
2009	-24.70%
2010	12.92%
2011	21.75%
2012	2.74%
2013	13.38%
2014	17.58%

REQUIRED SUPPLEMENTARY INFORMATION

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation Date	June 30, 2014
Actuarial Cost Method	Entry Age
Amortized Method	Level Percentage of Payroll, Closed
Remaining Amortization Period	17 Years (single equivalent period)
Asset Valuation Method	3-Year Smoothed Market: 20% Corridor
Inflation	3.0% (price inflation)
Actuarial Assumptions:	
Investment Rate of Return	7.75%
Projected Salary Increase	3.5% to 11% (including 3.5% wage inflation)
Cost-of-Living Adjustments	2.4% Compound

Amounts reported in 2014 reflect adjustments to expected rates of withdrawal, disability, normal and early retirement, mortality, and merit and seniority pay. The actuarial assumptions were based on the results of an actuarial experience study for the period July 1, 2007 through June 30, 2012, and the adjustments were made to more closely reflect actual experience.

REQUIRED SUPPLEMENTARY INFORMATION

Other Post-Employment Benefit (OPEB) Plan Schedule of Funding Progress for MoDOT and MSHP Medical and Life Insurance Plan

Year Ended June 30	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)
2008	\$0	\$1,178,303	\$1,178,303	0%
2010 ⁽¹⁾	0	1,036,681	1,036,681	0%
2012	0	1,048,333	1,048,333	0%
2014	0	857,676	857,676	0%

(1) New assumptions adopted

Actuarial valuations are performed biennially. The July 1, 2013 actuarial valuation was used for FY14 financial statement, the July 1, 2011 actuarial valuation was used for FY12 and FY13 financial statements, the July 1, 2009 actuarial valuation was used for FY10 and FY11 financial statements, and the July 1, 2007 actuarial valuation was used for FY08 and FY09 financial statements. As allowed by the GASB, this reporting requirement is being implemented prospectively, as prior years' data is not available.

Because this plan is an internal service fund of MoDOT, assets have not been set aside. Therefore, there is no actuarial value of assets. This results in a calculated funded ratio of zero percent.

Notes to the OPEB Schedule of Funding Progress

The information presented in the required supplementary schedule was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest actuarial valuation follows:

Valuation Date	July 1, 2013
Actuarial Cost Method	Projected Unit Credit
UAAL Amortization Method	Level Dollar Amount
UAAL Amortization Period	30 Years
UAAL Amortization Approach	Open
Investment Return (discount) Rate	4.5%
Healthcare Cost Trend Rate	8.0%, Decreasing to 5% after 2017
Admin Expense Trend (Inflation) Rate	4.0%

Supplementary Information

Schedules Of Administrative Expenses

For the Years Ended June 30, 2014 and 2013

	2014	2013
Personal Services:		
Salary Expense	\$1,208,775	\$1,083,168
Employee Benefit Expense	1,281,751	930,439
Total Personal Services	\$2,490,526	\$2,013,607
Professional Services:		
Actuarial Services	\$122,310	\$86,534
Audit Expense	34,500	32,000
Disability Program	11,648	11,552
Consultant Fees	76,626	105,354
IT Hosting and Support	212,764	0
Fiduciary Insurance	65,305	0
Other	13,588	22,469
Total Professional Services	\$536,741	\$257,909
Miscellaneous:		
Depreciation	\$370,617	\$373,177
Meetings/Travel/Education	117,751	88,283
Equipment/Supplies	79,091	80,456
Printing/Postage	64,334	81,229
Bank Service Charge	8,666	8,479
Building Expenses	39,977	39,009
Other	28,652	55,076
Total Miscellaneous	\$709,088	\$725,709
Total Administrative Expenses	\$3,736,355	\$2,997,225

Supplementary Information

Schedules Of Investment Expenses

For the Years Ended June 30, 2014 and 2013

	2014	2013
Investment Income Expenses:		
Management and Performance Fees		
Aberdeen Asset Management	\$ 11,662	\$ 18,414
ABRY Partners	306,214	293,239
Acadian Asset Management	617,808	828,701
AEW	286,333	210,394
Albourn	360,000	240,000
American Infrastructure MLP	226,672	275,532
Anchorage Capital	893,425	752,197
Apollo Real Estate	175,849	299,182
AQR Capital Management	340,179	274,202
Artio (formerly Julius Baer)	0	43,943
Audax Group	35,487	51,010
Barclays Global Investors	184,450	196,443
Bernzoff	166,582	0
Blue Trend	182,057	370,851
Brevan Howard	303,212	822,236
Bridgewater Associates	993,310	547,970
Capital Partners	178,105	0
CBRE	1,268,455	1,174,270
Cevian	952,542	573,370
Clifton	96,250	125,713
Colony Capital	0	25,000
CarVal Investors (CVI)	201,632	303,326
Deephaven Capital Management	1,192	1,680
EIF Management	130,736	151,941
Energy & Mineral Group Midstream Resource	219,401	257,255
Enhanced Investment Technologies (INTECH)	458,918	379,428
GMO	256,033	0
Golub	193,455	63,407
Grove Street Advisors	1,500,000	1,500,000
Gryphon	164,260	0
GSO	676,890	912,066
ING Clarion	439,817	613,605
KPS	8,476	0
Luxor	(54,478)	1,167,106
M&G	6,366	0
Metacapital	249,808	0
Natural Gas Partners	389,032	296,368
Ned Davis	35,000	0
Och-Ziff Real Estate	722,212	159,862
OCP	197,424	0
Ospraie	(455,493)	1,664,932
Peak 6	467,797	0
PFM	339,366	101,113
Pinnacle Associates	160,825	343,767
Principal Global Investors	1,135,169	1,001,104
Ridgewood	300,000	0
RMK Timberland	119,973	119,973
Rothschild Asset Management	96,021	249,593
Schroders	5,528	0
Silchester International Investors	689,854	580,572
Stark Investments (Shepard)	21,760	16,026
Stellium	545,002	711,020
Structured Portfolio Management (SPM)	28,316	448,390
Taconic	604,129	723,425
Tessera	142,186	0
Tortoise	444,850	519,153
Urdang	33,538	65,990
ValueAct	881,105	1,039,985
Vectis	168,750	187,500
Walker Smith	0	33,078
Western Asset Management Company	41,578	132,612
Total Management and Performance Fees	19,145,020	20,866,944
Investment Custodial Fee	78,703	72,579
Performance Management	113,821	102,846
General Consultant (monitoring) Fee	312,000	312,000
Other Investment Expenses	480,718	127,429
Total Investment Income Expenses	\$ 20,130,262	\$ 21,481,798
Securities Lending Expenses:		
Borrower Rebates (Refunds)	(\$ 98,833)	(\$ 27,457)
Bank Fees	92,229	74,954
Total Securities Lending Expenses (Income)	(\$ 6,604)	\$ 47,497

Supplementary Information

Schedules Of Consultant And Professional Expenses

For the Years Ended June 30, 2014 and 2013

	2014	2013
Actuarial Services	\$ 122,310	\$ 86,534
Audit Services	34,500	32,000
Disability Administrative Services	11,648	11,552
Legislative Consultant	30,035	30,055
Board Governance Consultant	0	29,337
Customer Service and Benefit Delivery	10,000	10,700
Insurance Consultant	6,000	6,000
Other Consultant Fees	30,591	29,262
Fiduciary Insurance	65,305	0
IT Hosting and Support	212,764	0
Other	13,588	22,469
Total Consultant and Professional Expenses	<u>\$536,741</u>	<u>\$257,909</u>

Pace yourself.



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"We all have dreams. But in order to make dreams come into reality, it takes an awful lot of determination, dedication, self-discipline, and effort."

*—Jesse Owens,
4-time Olympic Gold Medalist at the 1936 Olympics*

Chief Investment Officer Report

Scott Simon
Executive Director



**MoDOT & Patrol
Employees' Retirement System**

Pam Henry
Assistant Executive Director

November 20, 2014

To the Members of the MoDOT & Patrol Employees' Retirement System:

It is my pleasure to provide you with the investment section of this year's Comprehensive Annual Financial Report (CAFR). This section is a supplement to the comprehensive report and provides an overview of developments and performance within the investment portfolio.

"On Your Mark" is the theme to this year's CAFR, and we hope you find that theme relevant to the progress we've made with MPERS' investment portfolio. This report marks the 11th year I've wrote to you as Chief Investment Officer at MPERS, and I'm proud of the work your system has accomplished to prepare us for the years ahead.

When I started in 2003, MPERS' investment portfolio was relatively straight forward, relying on the traditional asset classes of stocks and bonds to deliver the targeted returns. This was supported by the historical returns of those markets, where a conservative asset allocation of 55% equities and 45% bonds generated double-digit annual returns for much of the 80's and 90's. Unfortunately the turn of the century brought a major downturn in the equity markets (led by overvalued internet and technology companies) and considerably lower interest rates in the bond markets. The traditional 55/45 mix of equities and bonds was no longer expected to generate a return that met MPERS' actuarial hurdles. MPERS' Board of Trustees recognized the need to adapt and change, and began a major overhaul of the investment portfolio to match the new investment climate. The most noteworthy changes included the hiring of dedicated investment staff to administer the program, surrounding that staff with highly regarded consultants, and the use of alternative investment strategies to boost expected returns and manage risk.

Fast forward ten years, and the restructuring of the portfolio is mostly complete. The alternative asset classes that were just a modeling exercise in 2004 are now fully invested and maturing nicely. We continue to expand our internal investment capabilities, both in terms of the number of staff and the overall investment knowledge of that staff. Together with the assistance from MPERS' consultants, we have completely restructured the investment portfolio into a diversified mix of global investment strategies. Like most long term growth projects, we had our share of challenges and growing pains. The most significant of which came during the financial crisis of 2008 and 2009, where the alternative investment strategies failed to provide the diversification we expected in our modeling. Fortunately, the strategies that struggled during the crisis have performed extremely well over the past five years and have proven to be the right long-term decision. As the portfolio continues to mature, the lessons learned from the financial crisis are invaluable and will serve MPERS well during the next (and inevitable) downturn in the markets.

Fiscal year 2014's performance suggests our efforts to restructure the portfolio were "on the mark" as MPERS posted strong results from both an absolute and relative return perspective. MPERS' portfolio posted a 17.59% return in fiscal year 2014, outperforming the policy benchmark return by 3.2%. Every major asset class delivered positive returns for the year, led by the private equity portfolio with a 25.30% return and the global equity portfolio with a 23.84% return. The real estate, real assets, hedge fund and fixed income

Office Location: 1913 William St., Jefferson City, MO 65109 • **Mailing Address:** Post Office Box 1930, Jefferson City, MO 65102-1930
Telephone Number: (573) 298-6080 • **Toll Free:** 1-800-270-1271 • **Admin. Fax:** (573) 526-5895 • **Benefits Fax:** (573) 522-6111
Website: www.mpers.org • **E-Mail:** mpers@mpers.org

Chief Investment Officer Report

Members of the MoDOT & Patrol Employees' Retirement System:

November 20, 2014

Page 2

portfolios generated returns of 17.71%, 17.01%, 9.16%, and 8.53%, respectively. Longer-term, MPERS now ranks in the top 15% of our peer universe across the one, three, five, and ten-year performance periods. MPERS' ten-year risk/return profile is even more impressive, as we rank in the top ten percent in the peer universe for returns while ranking in the bottom third of our peers in the amount of risk in the portfolio (as measured by annualized standard deviation of returns).

Looking forward, the financial markets have a whole new set of obstacles to overcome. After five strong years of performance, equity and credit valuations are at the high end of their historical ranges and market volatility has dropped to pre-recession lows. Investors must fight the urge to get complacent and stay focused on the risks that remain in the market. Two macro risks that we are closely monitoring include the potential for rising interest rates and the geo-political risk in Russia/Ukraine and the Middle East. Fiscal year 2015 will also mark the end of the Federal Reserve's quantitative easing program, and it remains to be seen if the economy is strong enough to grow without the unprecedented amount of government support and stimulus. In terms of MPERS' portfolio, this reinforces the need to be realistic about lower return prospects and continue looking for opportunities and strategies with more attractive entry points.

Fortunately, obstacles and uncertainty typically lead to opportunities, and MPERS' portfolio has the governance model and structure in place to capitalize on whatever the future holds. The restructuring that started in 2004 has proved beneficial to the members of the system, as evidenced by the strong performance over the past ten years. I hope you agree this performance demonstrates our efforts to restructure the portfolio were "on the mark", that MPERS' is "set" for whatever the future holds, and ready to "go" forward towards our long-term goal of improving the funded status of the system.

Thank you for the opportunity to serve as your Chief Investment Officer, and I look forward to leading the continued growth and development of MPERS' investment portfolio.

Sincerely,



Larry Krummen, CFA

Investment Consultant Report



KEVIN M. LEONARD
PARTNER

October 2014

The Board of Trustees
MoDOT & Patrol Employees' Retirement System
PO Box 1930
Jefferson City, MO 65102

Dear Board Members:

In our role as the general investment consultant, we assist the Board in several manners: determining and executing the overall asset allocation strategy of the Plan; advising on the investment policy of the Plan; facilitating investment manager searches (both traditional and alternative asset classes); conducting custodial service searches; providing ongoing performance evaluation for each individual investment manager and the overall investment portfolio; as well as providing pertinent education to the Board.

MPERS' objective is to provide service, disability, death and vested retirement benefits to members and their beneficiaries. To ensure a solid foundation for the future of the System, MPERS has developed an investment program designed to achieve the actuarially assumed rate of return over the long term, while prudently managing the risk of the portfolio. The pension fund is required to satisfy the need to pay accumulated/earned retirement benefits today, while at the same time be prepared for "uncertain" future benefits. This balancing of short-term versus long-term needs is a key tenant in the overall construction of the portfolio. To facilitate this balance, the Board has adopted a diversified asset allocation structure. Our goal is to diversify the System's assets within the traditional and non-traditional asset classes to reduce volatility, achieve above market returns, and to better protect the portfolio against difficult market conditions.

MPERS Fiscal Year 2014 Performance and Key Initiatives

For the fiscal-year-ending June 30, 2014, the MPERS Total Fund returned 17.6% on a net-of-fees basis. For the fiscal-year-ending June 30, 2014, relative to peer group comparison (InvestorForce Public Fund Universe), the 17.6% return ranked MPERS in the 15th percentile (1% being the highest, 100% being the lowest), outpacing 85% of other public funds within the universe. For the fiscal year, total fund performance (relative to peer group) was driven by strong absolute and relative returns across the majority of the composite portfolios. The real estate, global equity and fixed income portfolios were the key contributors for the year.

During Fiscal Year 2014, key initiatives accomplished include:

- Continued to work diligently on the expansion of the alternative investment program, which will further assist in the diversification of the portfolio
 - New strategies/managers were hired within the opportunistic debt, private equity, real assets, real estate, and hedge fund portfolios
- Conducted a comprehensive review of the Global Equity portfolio in fiscal year 2014. The comprehensive review ultimately led to a restructuring of the Global Equity portfolio which is detailed below:
 - As part of the review, it was determined that MPERS had a significant overweight to small cap equities, relative to the MSCI ACWI Index

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Investment Consultant Report



- As a result, the small cap portfolio has since been resized and the U.S. large and small cap allocations are closer in line with that of the Index
 - Rothschild was terminated due to poor performance
 - One new small cap manager (Bernzott) and one new micro-cap manager (Kennedy Capital) were hired
- The following steps were taken to enhance the International Equity portfolio:
 - The termination of the Acadian 130/30 strategy due to its underperformance
 - The hiring of Gryphon and Acadian's International Small Cap strategy
 - The Gryphon allocation helps increase the portfolio's developed non U.S. exposure
 - The Acadian allocation is consistent with one of NEPC's best ideas, an active international small cap mandate
 - The hiring of GMO's Emerging Market Equity strategy helps increase the portfolio's emerging market equity exposure
- Both relative and absolute performance within the fixed income portfolio has been strong and as a result, there were no major changes to the structure of the portfolio during fiscal year 2014.
 - Despite the strong performance, staff and NEPC continue to monitor the fixed income portfolio
 - As rates continue to rise and we enter into a low return environment, we will closely monitor the role of fixed income and structure the portfolio accordingly

As the asset allocation strategy evolves year after year, diversification and risk mitigation will continue to be the pillars of MPERS' asset allocation structure.

NEPC, LLC appreciates the opportunity to serve as your consultant. It is a pleasure to work with MPERS and we look forward to continuing our relationship for the benefit of the Board, staff, and most importantly, the members of the System.

Sincerely,

A handwritten signature in black ink, appearing to read 'K. M. Leonard', is written over a light blue horizontal line.

Kevin M. Leonard
Partner

Investment Activity Overview

Summary of Investment Policy

The primary objective of the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (MPERS) is to provide active and retired employees with the retirement benefits provided under Missouri law. The investment portfolio is constructed to generate a total return that, when added to employer contributions, is sufficient to meet these benefit obligations. Following prudent standards for preservation of capital, the goal is to achieve the highest possible rate of return consistent with the plan's tolerance for risk as determined by the Board of Trustees in its role as fiduciary.

Investment management is delegated to MPERS' staff and external asset managers. The managers operate within the guidelines, objectives and constraints set forth in their respective investment management agreement.

Market Value of Investments

As of June 30, 2014, MPERS' investment portfolio had a total market value of \$1.92 billion, representing an increase of \$243 million from fiscal year-end 2013. Over the course of the year, an additional \$48 million was

transferred out of the fund to meet benefit payments and other obligations. When viewed together, the net increase to the portfolio from investment activity equated to \$291 million.

Investment Performance

Fiscal year 2014 was another excellent year for MPERS' investment portfolio, both from an absolute and relative return perspective. The fund generated a 17.59% return for the year, net of all management fees and based on time-weighted rates of return and market valuations. Every major asset class delivered positive returns for the year, led by the private equity portfolio with a 25.30% return and the global equity portfolio with a 23.84% return. The real estate, real assets, hedge fund and fixed income portfolios generated returns of 17.71%, 17.01%, 9.16%, and 8.53%, respectively. Additional information on the performance across the major asset classes (and their respective benchmarks) is listed below.

Investment Performance (Including Benchmarks)

	1-Year	3-Year	5-Year	10-Year
Total Fund	17.59%	11.07%	13.50%	7.63%
Policy Benchmark	14.48	9.11	11.66	7.41
Global Equity	23.84	12.87	17.10	8.58
MSCI ACWI	22.95	10.25	14.28	7.46
Private Equity	25.30	14.16	13.49	n/a
S&P 500 + 300 bps	25.45	18.06	24.97	n/a
Fixed Income	8.53	7.77	10.79	6.09
Barclays US Universal	5.20	4.22	5.58	5.27
Real Estate	17.71	13.39	10.10	6.55
NFI-ODCE	12.32	11.86	5.65	5.80
Real Assets	17.01	n/a	n/a	n/a
CPI + 400 bps	6.15	n/a	n/a	n/a
Hedge Funds	9.16	6.12	7.81	n/a
HFRI Fund of Funds	7.55	3.28	4.23	n/a

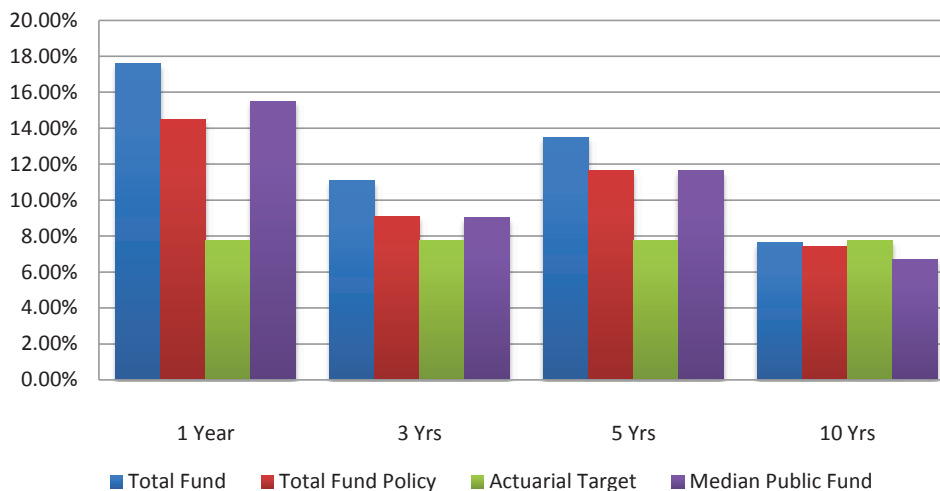
* Initiated 10/1/2012

Investment Activity Overview

When evaluating performance, the Board of Trustees looks at three primary performance objectives: a) to meet or exceed the actuarial assumed rate of return of 7.75%, b) to outperform a policy benchmark that represents the return that could be achieved by investing passively in the broad markets in the same percentages to MPERS' target asset

allocation, and c) to rank at or above the median public fund investment return.

Historical returns versus the three primary performance goals are listed graphically below:



MPERS' one, three, and five year performance remains safely above the actuarial target, while the ten year results remain slightly below the 7.75% target. As of June 30, 2014, the portfolio ranked in the top 15% of the public fund peer universe for the one, three, five, and ten year periods. The fund continues to perform well relative to policy benchmarks across all measurement periods as well.

Asset Allocation Overview

There were no revisions to MPERS' asset allocation targets in fiscal year 2014.

As of June 30, 2014, all of the sub-asset class allocations were within the acceptable ranges established by MPERS' investment policy. Any deviance relative to the target allocation represents a conscious decision based on our views of the market. The chart below lists the target and actual asset allocation as of June 30, 2014, followed by commentary on each of the underlying asset classes.

Asset Class	Ending FY13 Allocation	FY14 Target Allocation	Ending FY14 Allocation
Global Equity	32.31%	30%	31.42%
Private Equity	17.42%	15%	18.34%
Fixed Income	20.54%	25%	22.05%
Real Assets	4.26%	5%	4.94%
Real Estate	13.86%	10%	12.27%
Hedge Funds	10.38%	15%	10.58%
Cash	1.24%	0%	0.40%

Investment Activity Overview

Global Equity:

MPERS began the year with a 32.31% allocation to global equities, representing a modest overweight versus the targeted allocation of 30%. We maintained the overweight throughout most of fiscal year 2014, closing the year with a 31.42% allocation. Low interest rates and the massive amount of liquidity in the market created an excellent environment for equities, as the portfolio generated a 23.84% return during fiscal year 2014. MPERS' private equity portfolio was the only asset to generate a better return for the year. Relative performance was also strong as MPERS' outperformed the equity benchmark return of 22.95% (representing 0.9% of excess return). The majority of the excess return came from MPERS' allocation to master limited partnerships (MLPs), which generated a 37.77% return for the year.

After five years of strong performance in the equity markets, market volatility has drifted back to pre-crisis levels and valuations have moved to the high end of historical ranges. With this in mind, we have started to migrate the portfolio back towards the long term target allocation of 30%. We expect to maintain a neutral to slight overweight position to equities throughout the remainder of calendar year 2014.

Fixed Income:

We began fiscal year 2014 with a 20.54% allocation to fixed income relative to the 25% target, on the belief that income-oriented strategies in the real estate sector were more attractive than traditional fixed income. Interest rates spiked considerably during the first part of fiscal year 2014 (3rd quarter of calendar year 2013), as investors started to price in the gradual unwinding of the Federal Reserve's quantitative easing program. We used the selloff in bonds as an opportunity to increase MPERS' exposure to traditional fixed income, and gradually added to the sector throughout the fiscal year. We ended the year with a 22.05% allocation, and continue to allocate capital to the sector as we identify opportunities.

The fixed income portfolio performed very well relative to the benchmark throughout the year, generating an 8.53% return versus the index return of 5.20% (representing excess return of 3.3%). The majority of the outperformance came from MPERS' opportunistic debt portfolio, which generated a 15.66% return for the year. The opportunistic debt sector remains attractive from a relative value perspective, and fiscal year 2014 was another active vintage year for new commitments in that space. Recent commitments include a lending strategy to seaborne shipping operators, and another lending strategy to Asian-based companies.

MPERS' internal fixed income portfolios have also performed well across all measurement periods, and staff is researching additional ways to utilize MPERS' in-house capabilities.

Hedge Funds:

MPERS' remained considerably underweight the targeted hedge fund allocation of 15% throughout the year, starting the year with a 10.38% allocation and ending with a 10.58% allocation. We continue to favor opportunities in the real estate, real assets, and private equity portfolios relative to the hedge fund sector, and remain conscious of the overall policy limit of 50% to alternatives.

We made a couple of minor changes to the manager lineup throughout the year, adding an additional long/short equity manager and a new relative value market neutral manager. The hires were offset by liquidating investments from underperforming managers. Overall the portfolio generated a return of 9.16% during the year, which outperformed the benchmark return of 7.64% (representing 1.5% of excess return).

Real Assets:

In its first full year of performance as a distinct asset class, the real assets portfolio generated a return of 17.01% versus a policy benchmark of 6.15% (representing 10.85% of excess return). The performance was driven by MPERS' energy focused funds which make up over 50% of the real assets portfolio. It was also an active year for new commitments in the sector, as we added several new relationships to complement the exposure in the energy sector. New commitments include an investment in the seaborne shipping sector, a lending strategy to metals and mining companies, an off-shore oil and gas drilling strategy, and a follow on investment to an existing infrastructure manager. Two of MPERS' best performing energy funds were also back in the market with their new funds, and we committed additional capital to their offerings as well. We ended fiscal year 2014 with a 4.94% allocation to real assets, versus the target of 5%. We expect the allocation will drift towards 7-7.5% of assets as the recent commitments invest their capital.

Prior to October 1, 2012, MPERS' combined the real assets and real estate together under one asset class. Carving out and reporting the real assets portfolio separately offers improved transparency within MPERS' alternative portfolio, and allows staff to model the real assets portfolio according to its unique characteristics. The allocation was initially funded by transferring the energy and infrastructure investments that were previously allocated

Investment Activity Overview

in the private equity portfolio, along with MPERS' timber portfolio.

Real Estate:

MPERS' real estate portfolio has a target allocation of 10% of assets, and includes a mix of public and private equity strategies, along with tactical exposures to public and private debt strategies. We continue to find excellent relative value opportunities in real estate debt strategies, as traditional lenders (primarily banks) have exited the sector following the financial crisis. The portfolio generated a 17.71% return in fiscal year 2014, which considerably outperformed the policy benchmark of 11.37% (representing 6.3% of excess return). New commitments for the year include a secondary acquisition of two real estate debt funds, and follow-on commitments to two of MPERS' best performing private equity real estate managers. We continue to overweight real estate strategies on the view that core real estate will outperform traditional fixed income markets, and ended fiscal year 2014 with a 12.27% allocation.

MPERS' now has a 10 year track record within the real estate sector, which offers an excellent opportunity to look back and evaluate performance. While performance has been strong on both an absolute and relative basis, we have seen mixed results with closed-end, blind pool investments in the value added and opportunistic real estate sectors. The typical "private equity" model of committing capital across each vintage year has simply not worked well over the trailing 10 year period. MPERS' successful performance is primarily attributed to well-timed moves and the tactical positioning of the portfolio throughout the financial crisis (the decision to pull from private equity core real estate and allocate to public Real Estate Investment Trusts (REITs) and Commercial Mortgage Backed Securities (CMBS) have served MPERS particularly well). Going forward, we are focused on building deeper relationships with the managers and strategies that have performed the best over the past 10 years. Staff is focused on strategies that offer excellent transparency into the underlying investments, and preferably strategies that charge fees only on invested capital.

Private Equity:

MPERS' private equity allocation slightly increased from 17.42% of assets to 18.34% of assets during the course of fiscal year 2014, versus the target of 15%. The portfolio generated a 25.30% return for the year, slightly trailing the "public equity plus" benchmark (S&P 500 + 3%) which

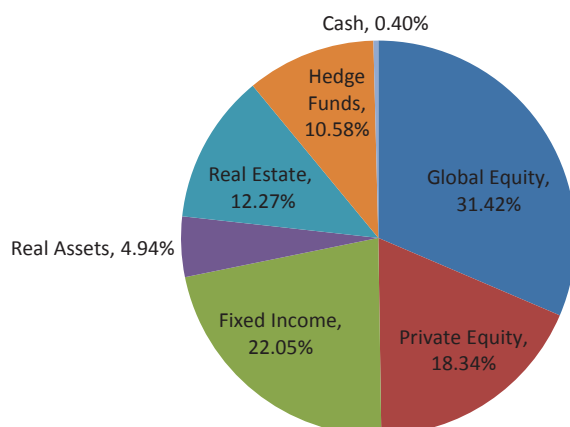
generated a 25.45% return (0.2% of underperformance). This benchmark has been difficult to outperform in recent years given the strength of public equity markets and the relative immaturity of MPERS' private equity portfolio. The portfolio continues to mature and work its way through the J-curve, and we remain optimistic that relative performance will improve in the coming years. On an absolute return basis, the private equity portfolio was the best performing asset class in fiscal year 2014, as well as the trailing 3-year period.

MPERS' continues to add resources and increase our knowledge of private equity and the underlying fund universe. During fiscal year 2014, MPERS' senior investment officer was promoted to manager of private equity and hedge funds to focus on sourcing direct manager relationships versus allocating through a fund-of-funds platform. With the assistance of external consultants, we believe MPERS can successfully administer the private equity portfolio without the extra layer of fees associated with fund-of-funds. Similar to the real assets program, we are focused on building deeper relationships with the managers and strategies that have performed well for us, strategies that offer excellent transparency into the underlying investments, and preferably strategies with attractive fee structures to mitigate the J-curve impact.

Looking Forward

Much like fiscal year 2013, the global economy was able to push forward in fiscal year 2014 despite a host of political and economic hurdles. After five strong years of performance, equity and credit valuations are at the high end of their historical ranges. Fiscal year 2015 will mark the end of the Federal Reserve's quantitative easing program, and it remains to be seen if the economy is strong enough to grow without the massive amount of government support and stimulus. With market volatility at pre-recession lows, investors must fight the urge to get complacent and stay focused on what the future holds. In terms of MPERS' portfolio, that means being realistic about lower return prospects and continuing to look for opportunities and strategies with more attractive entry points. We expect to gradually transition the portfolio towards long-term asset allocation targets, maintain appropriate diversification, and take smart risks with strategies that offer compelling risk-adjusted returns.

Investment Summary



Amounts Reported By Management-Type Allocation

	06/30/2013		Acquisitions	Dispositions	06/30/2014		% of Market
	Book Value	Market Value			Book Value	Market Value	
Global Equity	407,842,256	541,138,362	500,549,500	(475,627,549)	432,764,207	609,018,735	31.42%
Private Equity	291,759,114	291,699,857	65,145,956	(50,423,004)	306,482,066	355,403,063	18.34%
Fixed Income	307,375,037	343,956,408	205,679,506	(128,178,606)	384,875,937	427,312,960	22.05%
Real Estate	231,764,071	232,132,660	44,609,033	(65,117,451)	211,255,653	237,873,877	12.27%
Real Assets	57,297,040	71,367,579	30,744,437	(15,701,518)	72,339,959	95,835,897	4.94%
Hedge Funds	137,455,742	173,892,029	35,916,501	(13,938,280)	159,433,963	205,042,431	10.58%
Cash	20,734,560	20,734,567	361,608,745	(374,593,973)	7,749,332	7,749,416	0.40%
Total Investments	1,454,227,820	1,674,921,462	1,244,253,678	(1,123,580,381)	1,574,901,117	1,938,236,379	100.00%

Reconciliation to Statement of Plan Net Assets:

Less Accrued Investment Interest and Income	(7,241,177)
Less Investment Sales Receivable	(97,323)
Plus Investment Purchases Payable	6,230,329
Currency Adjustment	582,127
	<u>1,937,710,335</u>

Largest Investment Holdings

Largest Equity Securities (Non-Commingled Funds)

Security	Market Value	% of Total
EAPPLE INC COM STK	3,382,652	0.176%
ONEOK INC COM STK	3,285,473	0.171%
SPECTRA ENERGY CORP COM STK	2,886,304	0.150%
EXXON MOBIL CORP COM	2,324,500	0.121%
WILLIAMS CO INC COM	2,273,101	0.119%
VISA INC COM CL A STK	1,791,035	0.093%
FACEBOOK INC CL A CL A	1,749,540	0.091%
MICRON TECH INC COM	1,733,170	0.090%
CIGNA CORPORATION	1,600,278	0.083%
TOTAL SYS SVCS INC COM	1,573,641	0.082%

Largest Fixed Income Securities (Non-Commingled Funds)

Par Value	Security	Market Value
\$14,000,000	USA TREASURY NTS 1.125% TIPS 15/1/21 USD1000 01-15-2021	\$16,433,078
99,455,761	I/O GNMA 2013-H13 REMIC CL HI VAR RT DUE05-20-2063	12,773,849
18,937	MFB NT COLLECTIVE GOVERNMENT/CREDIT BOND INDEX FUND - LENDING	11,482,877
10,000,000	FFCB DTD 2.93 04-27-2029	9,300,500
10,000,000	FNMA PRIN STRIP SER 1-PRIN PMT ON 9% 2019 CAP DEB 02-01-2019 (UNDDATE) REG	9,083,320
8,058,646	FNMA REMIC TR 2013-56 CL-GM 2 08-25-2041	7,891,566
6,000,000	UNITED STATES TREAS BDS INDEX LINKED 1.75 DUE 01-15-2028 REG	7,815,836
114,306,539	I/O GNMA 2011-103 REMIC PASSTHRU CTF CL IO VAR 01-16-2040	7,708,261
56,009,504	I/O GNMA 2013-H13 REMIC CL JI VAR RT DUE06-20-2063 REG	6,248,560
6,000,000	GNMA SER 2011-19 CL JD 4 DUE 02-20-2041	6,174,810
7,000,000	CMO COMMERCIAL MTG TR 2007-GG9 CL AJ FLTRT DUE 03-10-2039 BEO	6,083,511
126,133,959	I/O GNMA 2012-H05 REMIC PASS THRU CTF CLAI VAR RT 03-20-2062	5,707,688
5,500,000	CMO CR SUISSE COML MTG TR SER 2006-C4 SER 2006-C4 CL-AJ DUE 09-15-2039 REG	5,480,717
5,000,000	CREDIT SUISSE FIRST BOSTON MTG SECS CORP2005-C4 MTG PASSTHRU CTF CL B 15 AUG 38	5,158,445
5,000,000	SLM STUDENT LN TR 2008-2 STUD LN BACKED NT CL A-3 FLTG RATE 04-25-2023 REG	5,047,800
5,000,000	CMO LB UBS COML MTG TR 2007 C7 MTG PASS THRU CTF CL CL B DUE 09-15-2045 REG	5,028,590
4,910,462	FNMA REMIC TR 2013-126 CL-CF VAR RATE 09-25-2041	4,893,751
4,000,000	UNITED STATES TREAS BDS DTD 02/15/2006 4.5% DUE 02-15-2036 REG	4,858,124
5,000,000	FEDERAL HOME LN BKS CONS BD 2.25 DUE 08-08-2022 REG	4,823,450
5,000,000	FEDERAL HOME LN BKS CONS BD 3 11-15-2027	4,633,500

Space and cost restrictions make it impractical to print the entire investment portfolio in this report. However, a portfolio listing is available for review in the office of the executive director of MPERS.

Schedule of Investment Expenses

	Market Value of Assets Under Management at 6/30/2014	Fees Accrued During FY14
Management and Performance Fees:		
Cash	\$ 13,882,259	\$ 0
Cash/S&P 500 Futures	53,184,030	0
Internal Fixed Income	239,599,015	0
Internal US Tips	25,384,609	0
NT Gov Credit	11,482,901	0
Recoverable Taxes	796,706	0
Aberdeen Asset Management	9,453,194	11,662
ABRY Partners	11,472,039	306,214
Acadian Asset Management	76,395,529	617,808
AEW	6,741,300	286,333
Albourne	0	360,000
American Infrastructure MLP	19,435,463	226,672
Anchorage Capital	16,182,231	893,425
Apollo Real Estate	26,910,942	175,849
AQR Capital Management	16,264,115	340,179
Audax Group	1,348,382	35,487
Barclays Global Investors	12,017,399	184,450
Bernzott	28,071,703	166,582
Blue Trend	9,620,951	182,057
Brevan Howard	14,770,184	303,212
Bridgewater Associates	17,601,559	993,310
Capital Partners	1,963,936	178,105
CBRE	37,941,700	1,268,455
Cevian	15,750,800	952,542
Clifton	0	96,250
Colony Capital	3,738,600	0
CarVal Investors (CVI)	29,314,408	201,632
Deephaven Capital Management	0	1,192
EIF Management	7,665,609	130,736
Energy & Mineral Group Midstream Resource	27,625,982	219,401
Enhanced Investment Technologies (INTECH)	149,262,413	458,918
GMO	31,469,247	256,033
Golub	13,211,996	193,455
Grove Street Advisors	328,785,077	1,500,000
Gryphon	50,346,411	164,260
GSO	8,644,658	676,890
ING Clarion	38,079,766	439,817
KPS	812,214	8,476
Luxor	17,800,677	(54,478)
M&G	4,380,892	6,366
Metacapital	10,585,391	249,808
Natural Gas Partners	18,676,529	389,032
Ned Davis	0	35,000
Northern Shipping	6,212,650	0
Och-Ziff Real Estate	18,271,106	722,212
OCP	10,777,077	197,424
Ospraie	2,784,996	(455,493)
Peak 6	15,920,901	467,797
PFM	11,494,851	339,366
Pinnacle Associates	34,922,235	160,825
Principal Global Investors	129,834,661	1,135,169
Ridgewood	1,543,547	300,000
RMK Timberland	9,641,365	119,973
Rothschild Asset Management	8,647,402	96,021
Schroders	0	5,528
Silchester International Investors	114,082,008	689,854
Stark Investments (Shepard)	1,457,136	21,760
Stellium	14,615,005	545,002
Structured Portfolio Management (SPM)	0	28,316
Taconic	18,264,566	604,129
Tessera	10,313,641	142,186
Torchlight	19,472,447	0
Tortoise	70,206,796	444,850
Urdang	5,248,294	33,538
ValueAct	16,984,030	881,105
Vectis	10,344,804	168,750
Walker Smith	0	0
Western Asset Management Company	0	41,578
Total Management and Performance Fees	\$1,937,710,335	\$ 19,145,020
Other Investment Expenses:		
Investment Custodial Fee		78,704
Performance Management		113,821
General Consultant (monitoring) Fee		312,000
Other Investment Expenses		480,718
Total Investment Income Expenses		\$ 20,130,263
Securities Lending Expenses:		
Borrower Rebates (Refunds)		\$ (98,833)
Bank Fees		92,229
Total Securities Lending Expenses (Income)		\$ (6,604)

Schedule of Brokerage Commissions

Brokerage Firm	Total Commission	Number of Shares	Commission Rate
STATE STREET BK & TRST CO,N.A NW YK	\$ 39,213	4,339,846	0.0090
STATE STREET BANK AND TRUST COMPANY	23,416	4,650,344	0.0050
ROSENBLATT SECURITIES LLC 501	14,274	586,103	0.0244
INSTINET	13,924	598,718	0.0233
JEFFERIES & COMPANY	9,214	803,624	0.0115
CAP INSTITUTIONAL SERVICES INC	8,790	323,975	0.0271
CREDIT SUISSE FIRST BOSTON CORPORATION	8,203	25,789,626	0.0003
BERNSTEIN, SANFORD C. & CO	8,137	324,250	0.0251
BNY ESI SECURITIES CO.	7,270	174,075	0.0418
DEUTSCHE BANK SECURITIES INC	6,254	309,202	0.0202
WEEDEN AND & CO	5,467	195,990	0.0279
CITATION GROUP	5,384	127,400	0.0423
LYNCH JONES & RYAN	5,160	289,700	0.0178
MERRILL LYNCH PIERCE FENNER & SMITH	5,124	1,338,594	0.0038
UBS WARBURG LLC	4,889	198,858	0.0246
GUZMAN AND COMPANY	4,542	205,550	0.0221
J.P. MORGAN SECURITIES LLC 57079	4,031	142,357	0.0283
JONESTRADING INST SERV	3,977	305,058	0.0130
STATE STREET GLOBAL ADVISORS	3,035	311,954	0.0097
BARCLAYS CAPITAL LE	2,385	127,882	0.0187
STIFEL NICOLAUS AND COMPAN	1,640	43,736,384	0.0000
NORTHERN TRUST CO	1,615	55,480	0.0291
GABELLI AND COMPANY	1,407	31,400	0.0448
UBS SECURITIES ASIA LIMITED	1,354	460,284	0.0029
NEEDHAM & COMPANY	1,156	28,900	0.0400
WELLS FARGO BANK, N.A.	1,143	49,612	0.0230
MERRILL LYNCH INTERNATIONAL LIMITED	1,133	238,017	0.0048
RBC DAIN RAUSCHER	1,091	34,251,784	0.0000
OTHERS (93 firms less than \$1,000 each)	21,113	1,408,784,005	0.0000
Total	<u>\$ 214,341</u>	<u>1,528,778,972</u>	
Average Commission Rates			0.0001

Notes

Stay the course, overcome the obstacles.

Actuarial Section

Marcio Jose Bastos Silva/Shutterstock.com

"I run because it's so symbolic of life. You have to drive yourself to overcome the obstacles. You might feel that you can't. But then you find your inner strength, and realize you're capable of so much more than you thought."

—Priscilla Welch

Actuary's Certification Letter



Gabriel Roeder Smith & Company
Consultants & Actuaries

One Towne Square
Suite 800
Southfield, MI 48076-3723

248.799.9000 phone
248.799.9020 fax
www.gabrielroeder.com

October 8, 2014

The Retirement Board
Missouri Department of Transportation
and Highway Patrol Employees' Retirement System
1913 William Street
Jefferson City, Missouri 65102-1930

Ladies and Gentlemen:

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board. This report should not be relied on for any purpose other than the purpose described.

The basic financial objective of the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (MPERS) is to establish and receive contributions which:

- (1) when expressed in terms of percents of active member payroll, will remain approximately level from generation to generation of Missouri citizens, and
- (2) when combined with present assets and future investment returns, will be sufficient to meet the present and future financial obligations of MPERS.

In order to measure progress toward this fundamental objective, MPERS has annual actuarial valuations performed. The valuations (i) measure present financial position, and (ii) establish contribution rates that provide for the current cost and level percent-of-payroll amortization of unfunded actuarial liabilities over a reasonable period. An actuarial valuation was performed based upon benefit conditions, data and assumptions as of June 30, 2014. This valuation indicates that contribution rates for the period beginning July 1, 2015 that are at least equal to the calculated contribution rates will meet the Board's financial objective. The calculated contribution rates are 58.05% of payroll for the 6,153 Non-Uniformed employees and 57.76% of payroll for the 1,237 Uniformed patrol employees.

The plan administrative staff provides the actuary with data for the actuarial valuation. The actuary relies on the data after reviewing it for internal and year to year consistency. Member data was not otherwise audited by the actuary. The actuary summarizes and tabulates population data in order to analyze longer term trends. We are not responsible for the accuracy or completeness of the data provided by MPERS.

Actuary's Certification Letter

The Retirement Board
October 8, 2014
Page 2

Gabriel, Roeder, Smith & Company was responsible for the following schedules found in the Actuarial Section:

- Summary of Actuarial Assumptions and Methods
 - Probabilities of Separation From Active Employment
 - Individual Salary Increases
 - Joint Life Retirement Values
 - Probabilities of Retirement for Members
 - Probabilities of Disability for Members
- Summary of Member Data Included in Valuations
- Active Members by Attained Age and Years of Service
- Schedule of Active Member Valuation Data
- Solvency Test
- Derivation of Financial Experience
- Schedule of Retirees and Beneficiaries Added and Removed
- Summary of Plan Provisions
- Legislative Changes

Gabriel, Roeder, Smith & Company was responsible for the following schedules found in the Financial Section:

- Schedule of Changes in the Employer's Net Pension Liability
- Schedule of Employer's Net Pension Liability
- Schedule of Employer Contributions
- Schedule of the Actuarially Determined Contributions

Actuarial valuations are based upon assumptions regarding future activity in specific risk areas including the rates of investment return and payroll growth, eligibility for the various classes of benefits, and longevity among retired lives. These assumptions are adopted by the Board after considering the advice of the actuary and other professionals. The assumptions and the methods comply with the requirements of the Governmental Accounting Standards Board. Each actuarial valuation takes into account all prior differences between actual and assumed experience in each risk area and adjusts the contribution rates as needed. Actuarial methods and assumptions were adopted by the Board pursuant to the June 30, 2012 Experience Study. Gabriel, Roeder, Smith & Company has produced the following reports as of June 30, 2014:

- Annual Actuarial Valuation Report
- GASB 67 Valuation Report
- GASB 68 Valuation Report

In order to gain a full understanding of the condition of this plan, all three of these reports should be read in their entirety.

Actuary's Certification Letter

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To the best of our knowledge, the report is complete and accurate and was made in accordance with standards of practice promulgated by the Actuarial Standards Board. The actuarial assumptions used for the valuation produce results which, individually and in the aggregate, are reasonable.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. Heidi Barry is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

The signing actuaries are independent of the plan sponsor.

Based upon the valuation results, it is our opinion that the Missouri Department of Transportation and Highway Patrol Employees' Retirement System continues to operate in accordance with actuarial principles of level percent-of-payroll financing. It is important to the well-being of the System that it continues to receive contributions at the actuarially determined levels. It is also important to continue to monitor both the total funded status and the funded status of the retiree liabilities to ensure that the funding policy is consistent with the expected life span of the respective unfunded obligation.

Respectfully submitted,



Heidi G. Barry, ASA, MAAA



Kenneth G. Alberts

Gabriel Roeder Smith & Company

Summary of Actuarial Methods and Assumptions

Valuation Date: June 30, 2014
Actuarial Cost Method: Entry Age
Amortized Method: Closed, level percent of payroll
Remaining Amortization Period: 17 years (single equivalent period)
Asset Valuation Method: 3-year smoothing
Actuarial Assumptions:
 Investment Rate of Return: 7.75%
 Projected Salary Increase: 3.50% to 11.00%
 Cost-of-Living Adjustments: 2.40% Compound
 Includes Wage Inflation at: 3.50%

An actuarial valuation is based upon an actuarial cost method, an asset valuation method, and actuarial assumptions. These methods and assumptions are chosen by the Board of Trustees after consultation with the Actuary and other advisors.

The actuarial cost method is called the Entry Age Actuarial Cost Method. This method is consistent with the Board's level percent of payroll funding objective. With this method, the level percent of payroll is determined that will fund a member's retirement benefit over the member's entire working lifetime, from date of hire (Entry Age) to date of exit from the active member population. Differences in the past between assumed and actual experience become part of unfunded actuarial accrued liabilities and are amortized with level percent of payroll contributions. This cost method was first used in the **June 30, 1999** valuation.

The asset valuation method is a three-year smoothed market value method in which assumed investment return is recognized immediately each year and differences between actual and assumed investment return are phased-in over a closed three-year period. This asset valuation method is intended to give recognition to the long term accuracy of market values while filtering out and dampening short term market swings. This method was first used in the **June 30, 1999** valuation.

The actuarial assumptions used in producing the valuation fall into two broad classes: economic assumptions, and demographic assumptions. Economic assumptions refer to long term rates of investment return, wage growth, covered population growth, and inflation. Demographic assumptions refer to retirement rates, turnover rates, disability rates, merit and seniority pay increases, and mortality rates. The current assumptions are based upon a 2007-2012 study of experience of the MPERS. The assumptions are reviewed from time to time to keep them reasonably current with expected experience.

Economic Assumptions

The investment return rate used in making the valuation was 7.75% per year, compounded annually (net after administrative expenses). This rate of return is not the assumed real rate of return. The real rate of return over wage inflation is defined to be the portion of investment return which is more than the wage inflation rate. Considering wage inflation recognition of 3.50%, the 7.75% rate translates to an assumed real rate of return over wage inflation of 4.25%. This rate was first used for the **June 30, 2013** valuation.

Summary of Actuarial Methods and Assumptions

Pay increase assumptions for individual active members are shown on the Salary Increase Assumption tables. Part of the assumption for each age is for a merit and/or seniority increase, and the other 3.50% recognizes wage inflation. These rates were first used for the **June 30, 2013** valuation.

Price Inflation is assumed to be 3.00%. This results in a 2.4% annual COLA assumption. It is assumed that the 2.4% COLA will always be paid

The Active Member Group size is assumed to remain constant at its present level.

The active member payroll for MoDOT members is assumed to increase 1.50% next year and 3.50% annually thereafter. The active member payroll for all other members is assumed to increase 3.50% annually for all years.

Non Economic Assumptions

The mortality table used to measure retired life mortality was the RP-2000 Combined Healthy Mortality Tables projected 16 years and set back 1 year for males and females. Related values are shown on the Joint Life Retirement Values table. This table was first used for the **June 30, 2013** valuation. Disabled pension mortality was based on PBGC Disabled Mortality tables. The healthy mortality tables include a margin for mortality improvement. The margin is in the 16-year projection. The disabled mortality tables do not include a margin for mortality improvement.

The probabilities of retirement for members eligible to retire are shown on the Rates of Retirement table. The rates for full retirement were first used in the **June 30, 2013** valuation. The rates for reduced retirement were first used in the **June 30, 2013** valuation. Upon retirement, members are assumed to pick the BackDROP period that when combined with the remaining annuity produces the highest liability.

The probabilities of disability for members eligible to retire are shown on the Rates of Disability table. The rates for disability were first used in the **June 30, 2013** valuation.

The probabilities of withdrawal from service, death in service and disability are shown for sample ages on the Probabilities of Separation tables. The death-in-service and disability rates were first used in the **June 30, 2013** valuation. The withdrawal rates were first used in the **June 30, 2013** valuation.

The data about persons now covered and about present assets was furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the Actuary. Data was furnished as of May 31 and assumed to be statistically equivalent to June 30.

The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (MAAA).

Summary of Actuarial Methods and Assumptions

Probabilities of Separation From Active Employment Less Than 5 Years of Service

Service	MoDOT, Civilian Patrol and MPERS		Uniformed Patrol	
	Male	Female	Male	Female
0-1	30.00%	20.00%	10.00%	10.00%
1-2	16.00	14.00	7.00	7.00
2-3	9.00	11.00	3.25	3.25
3-4	7.00	9.00	3.00	3.00
4-5	5.50	5.00	2.75	2.75

Probabilities of Separation From Active Employment More Than 5 Years of Service

Age	MoDOT, Civilian Patrol and MPERS		Uniformed Patrol	
	Male	Female	Male	Female
25	5.75%	5.10%	2.70%	2.70%
30	5.12	5.10	2.70	2.70
35	4.12	4.59	1.91	1.91
40	3.21	3.74	1.13	1.13
45	2.41	2.89	0.79	0.79
50	1.76	2.04	0.46	0.46
55	1.29	1.19	0.23	0.23
60	1.04	0.34	0.17	0.17

Summary of Actuarial Methods and Assumptions

Salary Increase Assumptions For an Individual Member

Age Based Salary Scale

Age	MoDOT, Civilian Patrol and MPERS			Uniformed Patrol		
	Merit & Seniority	Base (Economic)	Increase Next Year	Merit & Seniority	Base (Economic)	Increase Next Year
20	4.40%	3.50%	7.90%	6.00%	3.50%	9.50%
25	3.18	3.50	6.68	4.25	3.50	7.75
30	2.59	3.50	6.09	2.48	3.50	5.98
35	2.09	3.50	5.59	1.54	3.50	5.04
40	1.44	3.50	4.94	1.09	3.50	4.59
45	0.68	3.50	4.18	0.71	3.50	4.21
50	0.12	3.50	3.62	0.45	3.50	3.95
55	0.00	3.50	3.50	0.29	3.50	3.79
60	0.00	3.50	3.50	0.23	3.50	3.73

Service Based Salary Scale

MoDOT, Civilian Patrol and MPERS		Uniformed Patrol	
% Merit Increases is Salaries Next Year*		% Merit Increases is Salaries Next Year*	
Service Index	Rate	Service Index	Rate
1	8.0%	1	10.0%
2	7.0%	2	10.3%
3	4.5%		
4	4.0%		

*For Non-Uniformed members with 4 or less years of service and Uniformed members with 2 or less years of service, the service based table overwrites the age based table above.

Joint Life Retirement Values (7.75% Interest)

Sample Attained Ages	Present Value of \$1 Monthly for Life		Percent Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women	Men	Women
50	\$147.46	\$147.37	.1516%	.1159%	33.34	35.39
55	142.23	142.00	.2313%	.2064%	28.61	30.63
60	135.19	134.87	.4593%	.4099%	24.03	26.02
65	126.18	125.80	.9002%	.7955%	19.69	21.67
70	115.18	114.73	1.5803%	1.3715%	15.71	17.66
75	101.84	101.56	2.6618%	2.2752%	12.07	14.01
80	86.45	86.42	4.8531%	3.7094%	8.86	10.73

The present values shown above are for illustrative purposes only and include a 50% survivor benefit but do not include the value of future post-retirement increases. Males are assumed to be 3 years older than their spouses.

Summary of Actuarial Methods and Assumptions

Percent of Eligible Active Members Retiring Next Year (Rates of Retirement)

Closed and Year 2000 Plans						
Age	MoDOT, Civilian Patrol and MPERS				Uniformed Patrol	
	Male		Female		Male	Female
	Normal	Early	Normal	Early	Normal	
50	30.00%	0.00%	25.00%	0.00 %	35.00%	35.00%
55	27.00	3.00	32.00	3.00	20.00	20.00
60	19.00	8.00	22.00	6.00	100.00	100.00
65	35.00	0.00	35.00	0.00	100.00	100.00
70	40.00	0.00	50.00	0.00	100.00	100.00

Year 2000 Plan – 2011 Tier				
Age	MoDOT, Civilian Patrol and MPERS		Uniformed Patrol	
	Normal		Patrol	
	Age & Service	Rule of 90	Early	Normal
55	0.00%	30.00%	0.00%	30.00%
60	0.00	30.00	0.00	30.00
65	0.00	30.00	10.00	30.00
70	100.00	100.00	0.00	100.00

Percent of Members Becoming Disabled at the Indicated Age (Rates of Disability)

Age	MoDOT, Civilian Patrol and MPERS		Uniformed Patrol	
	Male	Female	Male	Female
25	0.04%	0.07%	0.01%	0.01%
30	0.09	0.08	0.02	0.02
35	0.13	0.13	0.02	0.02
40	0.17	0.17	0.05	0.05
45	0.23	0.36	0.09	0.09
50	0.33	0.55	0.19	0.19
55	0.62	0.74	0.35	0.35
60	1.12	0.90	0.58	0.58

Summary of Funding and Contributions

Schedule of Funding Progress

Year Ended June 30	Actuarial Asset Value	Accrued Liability – Entry Age	Unfunded Accrued Liability (UAAL)	Funded Ratio	Actuarial Covered Payroll ⁽¹⁾	UAAL as a Percentage of Covered Payroll
2005	\$1,417,348,982	\$2,627,409,025	\$1,210,060,043	53.94%	\$334,030,151	362.26
2006	1,521,142,953	2,740,437,837	1,219,294,884	55.51%	341,227,890	357.33
2007	1,685,807,004	2,897,267,409	1,211,460,405	58.19%	365,012,472	331.90
2008	1,783,902,280	3,019,633,781	1,235,731,501	59.08%	375,600,448	329.00
2009	1,471,496,660	3,113,393,645	1,641,896,985	47.26%	379,590,273	432.54
2010 ⁽²⁾	1,375,844,573	3,258,866,925	1,883,022,352	42.22%	378,063,006	498.07
2011	1,427,290,718	3,297,589,869	1,870,299,151	43.28%	362,654,376	515.72
2012 ⁽²⁾	1,531,033,613	3,306,278,671	1,775,245,058	46.31%	341,637,559	519.63
2013 ⁽²⁾	1,657,402,393	3,583,975,559	1,926,573,166	46.24%	329,481,506	584.73
2014	1,795,264,291	3,650,241,741	1,854,977,450	49.18%	336,590,797	551.11

(1) Values are estimated from contribution rate and amount.

(2) New assumptions and/or methods adopted.

See Note 5 of Notes to the Financial Statement in the Financial Section for Funding policy information.

Member and Employer Contribution Rates

Year Ended June 30	Employer Contributions All Benefit Structures		Member Contributions 2011 Tier All Groups
	Uniformed Patrol Group	Non-Uniformed Group	
2005	43.54%	28.28%	4.00%
2006	44.27%	30.49%	4.00%
2007	44.28%	31.10%	4.00%
2008	42.64%	31.04%	4.00%
2009	40.22%	30.72%	4.00%
2010 ⁽²⁾	39.95%	31.40%	4.00%
2011	49.53%	39.46%	4.00%
2012 ⁽²⁾	58.63%	45.45%	4.00%
2013 ⁽²⁾	55.03%	50.92%	4.00%
2014	55.23%	54.25%	4.00%

See Required Supplementary Information, Schedule of Employers' Contributions for more information.

Summary of Member Data Included In Valuations

	Non-Uniformed				
	Civilian Patrol	MoDOT and MPERS	Non-Uniformed Total	Uniformed Patrol	Grand Total
Active Members					
Closed Plan	434	2,298	2,732	658	3,390
Year 2000 Plan (also closed)	489	2,044	2,533	407	2,940
Year 2000 Plan - 2011 Tier (open)	204	684	888	172	1,060
Total Active Members	1,127	5,026	6,153	1,237	7,390
Total Active Members Prior Year	1,122	4,978	6,100	1,219	7,319
Retiree - Regular Pensioners					
Closed Plan	452	3,649	4,101	868	4,969
Year 2000 Plan (also closed)	467	2,796	3,263	2	3,265
Year 2000 Plan - 2011 Tier (open)	0	0	0	0	0
Total Regular Pensioners	919	6,445	7,364	870	8,234
Self Insured Disability Pensioners	5	55	60	3	63
Fully Insured Disability Pensioners	10	93	103	1	104
Terminated Vested Members	237	1,819	2,056	156	2,212
Total	2,298	13,438	15,736	2,267	18,003
Active Member					
Valuation Payroll	\$43,858,728	\$211,776,834	\$255,635,562	\$76,450,127	\$332,085,689
Active Member Valuation Payroll					
Prior Year	\$43,091,397	\$205,790,486	\$248,881,883	\$74,323,885	\$323,205,768
Unfunded Actuarial					
Accrued Liability	N/A	N/A	\$1,415,534,601	\$439,442,849	\$1,854,977,450

Member data for actuarial valuation is as of May 31, 2014

Active Members By Attained Age and Years of Service

MoDOT and MPERS

Closed Plan

Attained Age	Counted by Complete Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20	-	-	-	-	-	-	-	0	\$ 0
20-24	-	-	-	-	-	-	-	0	0
25-29	-	-	-	-	-	-	-	0	0
30-34	-	-	10	5	-	-	-	15	576,913
35-39	-	-	60	104	2	-	-	166	7,475,757
40-44	-	-	49	216	106	4	-	375	18,502,422
45-49	-	2	52	158	237	95	9	553	27,356,798
50-54	-	-	34	150	169	218	78	649	32,205,335
55-59	-	-	17	122	102	86	53	380	18,188,538
60-64	-	-	13	41	39	29	13	135	6,195,947
65-69	-	-	2	5	7	3	3	20	979,089
70+	-	-	-	-	3	-	2	5	251,849
Totals	0	2	237	801	665	435	158	2,298	\$111,732,648

Average Age 49.5 years
 Average Service 21.5 years
 Average Pay \$48,622

Year 2000 Plan

Attained Age	Counted by Complete Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20	-	-	-	-	-	-	-	0	\$ 0
20-24	3	-	-	-	-	-	-	3	90,342
25-29	32	113	1	-	-	-	-	146	5,558,718
30-34	20	229	105	-	-	-	-	354	14,370,551
35-39	32	168	172	2	-	-	-	374	15,196,177
40-44	29	134	139	-	-	-	-	302	11,607,723
45-49	15	125	124	4	-	-	-	268	9,996,232
50-54	22	116	139	4	2	-	-	283	10,753,913
55-59	14	91	87	2	-	-	-	194	7,200,538
60-64	6	50	44	2	-	-	-	102	3,775,142
65-69	1	8	6	-	-	-	-	15	576,689
70+	-	1	2	-	-	-	-	3	101,398
Totals	174	1,035	819	14	2	0	0	2,044	\$79,227,423

Average Age 42.9 years
 Average Service 9.0 years
 Average Pay \$38,761

Member data for actuarial valuation is as of May 31, 2014.

Active Members By Attained Age and Years of Service

MoDOT and MPERS

Year 2000 Plan - 2011 Tier

Attained Age	Counted by Complete Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20	1	-	-	-	-	-	-	1	\$ 19,306
20-24	99	-	-	-	-	-	-	99	3,117,133
25-29	162	-	-	-	-	-	-	162	5,244,037
30-34	102	-	-	-	-	-	-	102	3,018,812
35-39	83	-	-	-	-	-	-	83	2,403,422
40-44	66	-	-	-	-	-	-	66	1,934,611
45-49	57	-	-	-	-	-	-	57	1,673,653
50-54	60	-	-	-	-	-	-	60	1,742,405
55-59	42	-	-	-	-	-	-	42	1,264,985
60-64	8	-	-	-	-	-	-	8	273,471
65-69	3	-	-	-	-	-	-	3	104,296
70+	1	-	-	-	-	-	-	1	20,632
Totals	684	0	0	0	0	0	0	684	\$20,816,763

Average Age
Average Service
Average Pay

36.0 years
1.0 years
\$30,434

Member data for actuarial valuation is as of May 31, 2014.

Active Members By Attained Age and Years of Service

Uniformed Patrol

Closed Plan

Attained Age	Counted by Complete Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20	-	-	-	-	-	-	-	0	\$ 0
20-24	-	-	-	-	-	-	-	0	0
25-29	-	-	-	-	-	-	-	0	0
30-34	-	-	-	-	-	-	-	0	0
35-39	-	-	16	33	-	-	-	49	3,111,285
40-44	-	1	10	145	42	-	-	198	13,682,441
45-49	1	-	5	79	114	19	-	218	15,978,976
50-54	-	-	1	18	38	60	22	139	10,807,285
55-59	-	-	-	3	7	15	28	53	4,299,359
60-64	-	-	-	-	-	-	1	1	84,102
65-69	-	-	-	-	-	-	-	0	0
70+	-	-	-	-	-	-	-	0	0
Totals	1	1	32	278	201	94	51	658	\$47,963,448

Average Age 46.7 years
 Average Service 21.5 years
 Average Pay \$72,893

Year 2000 Plan

Attained Age	Counted by Complete Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20	-	-	-	-	-	-	-	0	\$ 0
20-24	1	-	-	-	-	-	-	1	42,339
25-29	35	55	1	-	-	-	-	91	4,400,076
30-34	11	92	30	-	-	-	-	133	6,911,983
35-39	3	37	71	-	-	-	-	111	6,178,132
40-44	3	14	38	-	-	-	-	55	2,873,309
45-49	1	3	7	-	-	-	-	11	580,287
50-54	-	2	1	-	-	-	-	3	160,710
55-59	-	-	1	-	1	-	-	2	114,229
60-64	-	-	-	-	-	-	-	0	0
65-69	-	-	-	-	-	-	-	0	0
70+	-	-	-	-	-	-	-	0	0
Totals	54	203	149	0	1	0	0	407	\$21,261,065

Average Age 34.3 years
 Average Service 8.7 years
 Average Pay \$52,238

Member data for actuarial valuation is as of May 31, 2014.

Active Members By Attained Age and Years of Service

Uniformed Patrol

Year 2000 Plan - 2011 Tier

Attained Age	Counted by Complete Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20	-	-	-	-	-	-	-	0	\$ 0
20-24	40	-	-	-	-	-	-	40	1,589,796
25-29	99	-	-	-	-	-	-	99	4,264,090
30-34	18	-	-	-	-	-	-	18	753,627
35-39	10	-	-	-	-	-	-	10	407,493
40-44	4	-	-	-	-	-	-	4	168,383
45-49	1	-	-	-	-	-	-	1	42,225
50-54	-	-	-	-	-	-	-	0	0
55-59	-	-	-	-	-	-	-	0	0
60-64	-	-	-	-	-	-	-	0	0
65-69	-	-	-	-	-	-	-	0	0
70+	-	-	-	-	-	-	-	0	0
Totals	172	0	0	0	0	0	0	172	\$7,225,614

Average Age 27.5 years
Average Service 2.0 years
Average Pay \$42,009

Member data for actuarial valuation is as of May 31, 2014.

Active Members By Attained Age and Years of Service

Civilian Patrol

Closed Plan

Attained Age	Counted by Complete Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20	-	-	-	-	-	-	-	0	\$ 0
20-24	-	-	-	-	-	-	-	0	0
25-29	-	-	-	-	-	-	-	0	0
30-34	-	-	-	-	-	-	-	0	0
35-39	-	-	5	17	1	-	-	23	934,596
40-44	-	-	8	36	12	-	-	56	2,516,594
45-49	-	1	8	41	28	15	3	96	4,220,476
50-54	-	-	6	31	30	34	20	121	5,352,503
55-59	-	-	4	23	24	19	16	86	3,878,369
60-64	-	-	4	15	6	8	6	39	1,665,610
65-69	-	-	-	2	6	-	2	10	331,280
70+	-	-	-	1	1	1	-	3	94,237
Totals	0	1	35	166	108	77	47	434	\$18,993,665

Average Age 51.1 years
 Average Service 21.9 years
 Average Pay \$43,764

Year 2000 Plan

Attained Age	Counted by Complete Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20	-	-	-	-	-	-	-	0	\$ 0
20-24	-	-	-	-	-	-	-	0	0
25-29	19	28	1	-	-	-	-	48	1,929,324
30-34	17	47	23	-	-	-	-	87	3,540,320
35-39	12	35	28	-	-	-	-	75	3,180,471
40-44	9	30	29	1	-	-	-	69	2,607,308
45-49	11	33	21	1	-	-	-	66	2,425,098
50-54	12	19	30	1	-	-	-	62	2,363,293
55-59	5	20	18	1	-	-	-	44	1,498,831
60-64	4	5	15	-	-	-	-	24	759,942
65-69	2	4	5	-	-	-	-	11	355,224
70+	-	1	2	-	-	-	-	3	86,843
Totals	91	222	172	4	0	0	0	489	\$18,746,654

Average Age 43.1 years
 Average Service 8.5 years
 Average Pay \$38,337

Member data for actuarial valuation is as of May 31, 2014.

Active Members By Attained Age and Years of Service

Civilian Patrol

Year 2000 Plan - 2011 Tier

Attained Age	Counted by Complete Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20	-	-	-	-	-	-	-	0	\$0
20-24	24	-	-	-	-	-	-	24	673,413
25-29	66	-	-	-	-	-	-	66	2,102,502
30-34	22	-	-	-	-	-	-	22	703,160
35-39	19	-	-	-	-	-	-	19	582,655
40-44	24	-	-	-	-	-	-	24	681,837
45-49	19	-	-	-	-	-	-	19	597,530
50-54	12	-	-	-	-	-	-	12	293,682
55-59	11	-	-	-	-	-	-	11	297,526
60-64	6	-	-	-	-	-	-	6	157,002
65-69	-	-	-	-	-	-	-	0	0
70+	1	-	-	-	-	-	-	1	29,102
Totals	204	0	0	0	0	0	0	204	\$6,118,409

Average Age 35.8 years
Average Service 1.6 years
Average Pay \$29,992

Member data for actuarial valuation is as of May 31, 2014.

Schedule of Active Member Valuation Data

Actuarial Valuation for June 30,	Number of Participating Employers	Number of Active Members	Covered Payroll	Average Pay	Percent Change in Average Pay from Prior Year
2005	3	9,193	\$345,695,867	\$37,604	3.10%
2006	3	9,033	348,614,699	38,593	2.60%
2007	3	8,640	360,842,421	41,764	8.20%
2008	3	8,599	369,424,653	42,961	2.90%
2009	3	8,784	377,652,245	42,993	0.10%
2010	3	8,457	369,911,252	43,740	1.70%
2011	3	8,231	361,639,001	43,936	0.40%
2012	3	7,458	329,293,168	44,153	0.50%
2013	3	7,319	323,205,768	44,160	0.00%
2014	3	7,390	332,085,689	44,937	1.80%
Ten-Year Average					2.10%

Member data for actuarial valuation is as of May 31, 2014.

Solvency Test

The MPERS funding objective is to meet long term benefit promises through contributions that remain approximately level from year to year as a percent of member payroll. If the contributions to the System are level in concept and soundly executed, the System will **pay all promised benefits when due – the ultimate test of financial soundness.**

A solvency test is one means of checking a system's progress under its funding program. In a solvency test for a non-contributory plan, the plan's present assets (cash and investments) are compared with:

1) The liabilities for future benefits to present retired

lives and 2) The liabilities for service already rendered by members. In a system that has been following the discipline of level percent of payroll financing, the liabilities for future benefits to present retired lives (liability 1) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by members (liability 2) will be partially covered by the remainder of present assets. The larger the funded portion of liability 2, the stronger the condition of the system. The schedule below illustrates the history of liability 2 of the System.

Valuation Date June 30	(1) Member Contributions	(2) Retirees and Beneficiaries	(3) Active and Inactive Members	Present Valuation Assets	Portion of Present Values Covered by Present Assets			
					(1)	(2)	(3)	Total
-----Millions-----								
1999	\$0	\$1,132	\$ 921	\$1,243	100%	100%	12%	61%
2000	0	1,238	951	1,423	100%	100%	19%	65%
2001	0	1,375	926	1,521	100%	100%	16%	66%
2002*	0	1,470	888	1,451	100%	99%	0%	62%
2003	0	1,555	863	1,367	100%	88%	0%	56%
2004	0	1,626	867	1,332	100%	82%	0%	43%
2005	0	1,669	958	1,417	100%	85%	0%	54%
2006	0	1,734	1,007	1,521	100%	88%	0%	46%
2007	0	1,810	1,057	1,686	100%	93%	0%	58%
2008	0	1,873	1,147	1,784	100%	95%	0%	59%
2009	0	1,947	1,166	1,471	100%	76%	0%	47%
2010*	0	2,034	1,225	1,376	100%	68%	0%	42%
2011	0	2,045	1,253	1,427	100%	70%	0%	43%
2012*	0	2,133	1,173	1,531	100%	72%	0%	46%
2013*	1	2,333	1,250	1,657	100%	71%	0%	46%
2014	2	2,384	1,264	1,795	100%	75%	0%	49%

* New assumptions and/or methods adopted.

Derivation of Financial Experience

Actual experience will never coincide exactly with assumed experience (except by coincidence). Gains and losses may offset each other over a period of years, but sizeable year-to-year variations from assumed experience are common. Detail on the derivation of the experience gain (loss) is shown below.

UAAL Beginning of Year (at July 1)	\$1,926,573,166
Normal Cost	46,927,026
Contributions	(187,398,786)
Interest	143,866,140
Net Change in LTD Assets	-
Expected UAAL Before Any Changes	1,929,967,546
Effect of Changes in Assumptions & Methods	-
Effect of Adjustment	-
Expected UAAL After Changes	1,929,967,546
End of Year UAAL (at June 30)	1,854,977,450
Gain/(Loss) for Year	\$74,990,096
Gain/(Loss) as a Percent of Actuarial Accrued Liabilities at Start of Year (\$3,584.0 million)	2.1%

Valuation Date June 30	Experience Gain (Loss) as % of Beginning Accrued Liability
1999	(7.7)%
2000	(0.1)%
2001	(9.3)%
2002	(4.5)%
2003	(5.2)%
2004	(2.9)%
2005	(1.5)%
2006	1.4%
2007	1.1%
2008	(0.2)%
2009	(12.6)%
2010	(3.8)%
2011	2.2%
2012	3.2%
2013	2.1%
2014	2.1%

Schedule of Retirees and Beneficiaries Added and Removed

Valuation Date	Added to Rolls		Removed from Rolls		Rolls End of Year		Average Annual Allowances	% Increase	
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		in Annual Allowance	in Average Annual Allowance
FY2014									
Retirees	307	\$4,434,888	176	\$2,317,420	6,365	\$178,670,075	\$28,071	3.54%	1.41%
Beneficiaries	112	1,163,441	126	863,108	1,900	\$31,253,184	16,449	3.91%	4.68%
Disabilities	19	6,760	25	19,831	173	\$935,492	5,407	3.41%	6.40%
FY2013									
Retirees	395	\$5,001,943	174	\$2,761,791	6,234	\$172,564,478	\$27,681	4.56%	0.85%
Beneficiaries	130	1,349,835	96	717,434	1,914	\$30,077,515	15,714	6.79%	5.00%
Disabilities	27	0	23	6,788	179	\$904,683	5,082	-1.88%	-3.00%
FY2012									
Retirees	413	\$5,988,784	171	\$2,119,116	6,013	\$165,042,751	\$27,448	4.10%	-0.09%
Beneficiaries	130	1,206,259	105	610,931	1,880	\$28,166,374	14,966	5.20%	3.69%
Disabilities	34	0	25	16,712	175	\$922,027	5,239	0.39%	-5.31%
FY2011									
Retirees	311	\$3,955,409	146	\$2,406,006	5,771	\$158,543,113	\$27,472	0.74%	-2.14%
Beneficiaries	102	891,718	109	710,880	1,855	26,772,995	14,433	-1.17%	-0.79%
Disabilities	38	0	14	10,399	166	918,403	5,533	1.69%	-13.00%
FY2010									
Retirees	272	\$3,218,890	137	\$3,252,182	5,606	\$157,380,575	\$28,074	3.29%	0.80%
Beneficiaries	103	930,442	104	625,292	1,862	27,089,491	14,549	5.79%	5.85%
Disabilities	21	0	25	73,638	142	903,107	6,360	-40.95%	-39.29%
FY2009									
Retirees	292	\$4,125,644	178	\$2,136,578	5,471	\$152,372,034	\$27,851	4.49%	2.31%
Beneficiaries	138	1,134,755	108	622,167	1,863	25,606,266	13,745	7.80%	6.07%
Disabilities	19	0	28	71,381	146	1,529,412	10,475	-11.67%	-6.23%
FY2008									
Retirees	331	\$3,940,198	151	\$1,202,185	5,357	\$145,826,691	\$27,222	4.97%	1.45%
Beneficiaries	113	763,176	92	437,560	1,833	23,753,030	12,959	6.59%	5.37%
Disabilities	21	54,465	32	57,913	155	1,731,521	11,171	-22.63%	-17.14%
FY2007									
Retirees	310	\$3,052,533	157	\$1,373,300	5,177	\$138,917,326	\$26,834	4.87%	1.77%
Beneficiaries	131	51,253	112	617,163	1,812	22,283,555	12,298	8.09%	6.96%
Disabilities	36	0	24	116,307	166	2,237,892	13,481	38.31%	28.31%
FY2006									
Retirees	252	\$3,005,557	166	\$1,477,199	5,024	\$132,465,613	\$26,367	3.89%	1.74%
Beneficiaries	106	715,154	75	381,966	1,793	20,615,839	11,498	7.09%	5.24%
Disabilities	22	170,138	22	106,561	154	1,618,075	10,507	9.70%	8.99%
FY2005									
Retirees	202	\$4,685,700	125	\$2,373,810	4,920	\$127,508,904	\$25,916	3.53%	1.91%
Beneficiaries	106	1,527,938	79	618,487	1,762	19,251,121	10,926	7.95%	6.29%
Disabilities	7	95,296	7	47,561	153	1,474,983	9,640	-1.86%	-1.86%

*New disabilities are covered / paid by the Standard Insurance Co.

Data of this chart is as of June 30, 2014.

Summary of Plan Provisions *

Comparison of the Closed Plan, the Year 2000 Plan, and the Year 2000 Plan - 2011 Tier For the Year Ended June 30, 2014

Plan Provision	Closed Plan	Year 2000 Plan	Year 2000 Plan - 2011 Tier
Membership Eligibility	<ul style="list-style-type: none"> Members who work in a position normally requiring at least 1,040 hours of work a year. 	<ul style="list-style-type: none"> Members hired for the first time on or after July 1, 2000, in a position normally requiring at least 1,040 hours of work a year. Members who left state employment prior to becoming vested and return to work on or after July 1, 2000, in a position normally requiring at least 1,040 hours of work a year. 	<ul style="list-style-type: none"> Members hired for the first time on or after January 1, 2011, in a position normally requiring at least 1,040 hours of work a year. Members who have never worked for a state agency covered by MPERS or MOSERS prior to January 1, 2011.
Normal Retirement Eligibility	<ul style="list-style-type: none"> Age 65 & active with 4 years of service. Age 65 with 5 years of service. Age 60 with 15 years of service. "Rule of 80"/minimum age 48. <p><u>Uniformed Members Only:</u></p> <ul style="list-style-type: none"> Age 55 & active with 4 years of service. Age 55 with 5 years of service. "Rule of 80"/minimum age 48. Age 60 & active – mandatory, no minimum service. 	<ul style="list-style-type: none"> Age 62 with 5 years of service. "Rule of 80"/minimum age 48. <p><u>Uniformed Members Only:</u></p> <ul style="list-style-type: none"> "Rule of 80"/minimum age 48. Age 60 & active - mandatory with 5 years of service. 	<ul style="list-style-type: none"> Age 67 with 10 years of service. "Rule of 90"/minimum age 55. <p><u>Uniformed Members Only:</u></p> <ul style="list-style-type: none"> Age 55 & active with 10 years of creditable service. Age 60 & active - mandatory, no minimum service.
Early (Reduced) Retirement Eligibility	<ul style="list-style-type: none"> Age 55 with 10 years creditable service. 	<ul style="list-style-type: none"> Age 57 with 5 years creditable service. 	<ul style="list-style-type: none"> Age 62 & active with 10 years of creditable service.
Benefit			
Life Benefit	1.6% x FAP** x service (Base benefit is increased by 33 1/3% for uniformed patrol members only.)	1.7% x FAP** x service	1.7% x FAP** x service
Temporary Benefit	Not available.	0.8% x FAP** x service Until age 62, only if retiring under "Rule of 80". <u>Uniformed Members Only:</u> Until age 62, if retiring under either normal retirement eligibility provision.	0.8% x FAP** x service Until age 62, only if retiring under "Rule of 90". <u>Uniformed Members Only:</u> Until age 62, if retiring under either normal retirement eligibility provision.
Vesting	5 years of service.	5 years of service.	10 years of service.
COLA (Cost-of-Living Allowance)	<ul style="list-style-type: none"> If hired before August 28, 1997, annual COLA is a minimum of 4%, maximum 5%, based on 80% of the increase in the CPI-U over the previous year, up to a maximum of 65% of original benefit. After 65% cap is reached, annual COLA increase will be equal to 80% of the change in the CPI-U, with a maximum of 5%. If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI-U with a maximum rate of 5%. 	<ul style="list-style-type: none"> Annual COLA is equal to 80% of the change in the CPI-U with a maximum rate of 5%. 	<ul style="list-style-type: none"> Annual COLA is equal to 80% of the change in the CPI-U with a maximum rate of 5%.

Summary of Plan Provisions *

Comparison of the Closed Plan, the Year 2000 Plan, and the Year 2000 Plan - 2011 Tier For the Year Ended June 30, 2014

Plan Provision	Closed Plan	Year 2000 Plan	Year 2000 Plan - 2011 Tier
Survivor Benefit (Death before retirement) Non Duty-Related Death	<ul style="list-style-type: none"> Survivor benefit to eligible spouse calculated using the Joint & 100% survivor option or 80% of the member's life income annuity paid to eligible children under age 21. If at least 3, but less than 5, years of service the survivor benefit is calculated using 25% of the member's base benefit calculated as if the member retired on their date of death. 	<ul style="list-style-type: none"> Survivor benefit to eligible spouse calculated using the Joint & 100% survivor option or 80% of the member's life income annuity paid to eligible children under age 21. 	<ul style="list-style-type: none"> Survivor benefit to eligible spouse calculated using the Joint & 100% survivor option or 80% of the member's life income annuity paid to eligible children under age 21.
Duty-Related Death	<ul style="list-style-type: none"> Survivor benefit to eligible spouse or children no less than 50% of final average pay (no minimum service requirement). 	<ul style="list-style-type: none"> Survivor benefit to eligible spouse or children no less than 50% of final average pay (no minimum service requirement). 	<ul style="list-style-type: none"> Survivor benefit to eligible spouse or children no less than 50% of final average pay (no minimum service requirement).
Optional Forms of Payment	Payment options include: <ul style="list-style-type: none"> Life Income Annuity Unreduced Joint & 50% Survivor Joint & 100% Survivor 60 or 120 Guaranteed Payments BackDROP 	Payment options include: <ul style="list-style-type: none"> Life Income Annuity Joint & 50% Survivor Joint & 100% Survivor 120 or 180 Guaranteed Payments BackDROP 	Payment options include: <ul style="list-style-type: none"> Life Income Annuity Joint & 50% Survivor Joint & 100% Survivor 120 or 180 Guaranteed Payments
Disability	Long-Term Disability and Work-Related Disability	Long-Term Disability and Work-Related Disability	Long-Term Disability and Work-Related Disability
Employee Contributions	Non-contributory	Non-contributory	4% of Gross Pay

*This summary describes the plan provisions of the Revised Statutes of Missouri (RSMo), as amended, that governed the programs, which MPERS administered during the period covered by this report. It does not overrule any applicable statute or administrative rule and, in the event of a conflict, the applicable statute or rule would apply. The Year 2000 Plan was effective July 1, 2000 and the Year 2000 Plan – 2011 Tier was effective January 1, 2011. A complete summary is available at the MPERS office.

**Final Average Pay – average of highest 36 consecutive months of pay.

See Note 2 of Notes to the Financial Statements for more information.

Legislative Changes

On June 20, 2014, Governor Jay Nixon signed into law HCS for House Bill 1882. This bill modifies the role public pension plans in Missouri have with regard to the Joint Committee on Public Employee Retirement (JCPER) and updates certain other provisions governing how public plans operate. More specifically, it: 1) expands the actuarial projection period regarding the cost of legislative changes to ten years; 2) changes the continuing educational requirements for trustees to six hours each year; 3) refines the provisions governing whether plans can implement updates to plan provisions; and 4) requires plans to develop a procurement action plan for utilization of minority and women money managers, brokers, and investment counselors.

Also signed into law was SCS for HCS for House Bill 1217. Primarily, this bill includes a provision that forfeits the pension of any plan participant who is convicted of certain felonies committed in direct connection with or directly related to the member's duties as a state employee. MPERS will be notified by the courts should this occur. It also prohibits the transfer or assignment of public pension benefits. Current statutes already have a similar assignment provision, so this portion of the bill has almost no implications for MPERS.

Notes

Congratulations - your goal is in sight.



Statistical Section

"Life is often compared to a marathon, but I think it is more like being a sprinter; long stretches of hard work punctuated by brief moments in which we are given the opportunities to perform at our best."

—Michael Johnson,
4-time Olympic Gold Medalist in Track and Field

STATISTICAL SUMMARY

Changes in Net Position

The chart on page 74 details a 10-year history of the additions (revenues) and deductions (expenses) of MPERS.

The chart on page 75 details a 10-year history of benefit payments by type.

Plan Membership

Overall, MPERS' membership increased by 260. Retired members and their beneficiaries increased by 112, terminated-vested members increased by 69, and active members increased by 79.

The charts beginning on page 76 detail the number of retired members by type of benefit and the average monthly benefit payments.

Other charts and graphs in this section detail demographic information concerning our members and employers.

All non-accounting data in this section was derived from internal sources and the annual actuarial valuation reports. Member data may differ between some schedules since the valuations are performed using data as of May 31 each year.

Changes in Net Position

MoDOT and Patrol Employees' Retirement System Changes in Net Position, Last Ten Fiscal Years

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Additions										
Employer Contributions	\$102,240,145	\$111,271,679	\$121,264,532	\$123,335,151	\$122,599,301	\$124,052,534	\$150,022,169	\$164,880,140	\$170,836,117	\$183,353,841
Employee Contributions ⁽¹⁾	0	0	0	0	0	0	45,361	202,843	503,550	1,282,379
Transfers from Other Systems ⁽²⁾	0	0	0	0	0	0	17,609,276	264,954	1,727,834	1,784,382
Other Contributions	364,680	271,038	529,926	1,192,527	444,000	424,172	453,984	908,898	635,900	978,184
Net Investment Income	144,641,068	212,206,238	283,549,424	(42,915,886)	(426,265,311)	166,307,054	279,612,052	42,091,564	198,139,438	319,445,655
Other Income	31,104	41,542	31,580	31,546	33,571	33,145	33,141	13,760	1,650	125
Total Additions to Fiduciary Net Position	247,276,997	323,790,497	405,375,462	81,643,338	(303,188,439)	290,816,905	447,775,983	208,362,159	371,844,489	506,844,566
Deductions										
Benefit Payments	157,742,337	164,997,406	175,970,479	185,801,362	192,013,250	196,721,274	202,153,768	219,704,320	224,518,100	231,384,708
Administrative Expenses	1,916,592	1,927,594	2,120,764	2,371,215	2,339,501	2,512,181	2,658,849	2,934,969	2,997,225	3,736,355
Total Deductions from Fiduciary Net Position	159,658,929	166,925,000	178,091,243	188,172,577	194,352,751	199,233,455	204,812,617	222,639,289	227,515,325	235,121,063
Change in Net Position	\$87,618,068	\$156,865,497	\$227,284,219	\$(106,529,239)	\$(497,541,190)	\$91,583,450	\$242,963,366	\$(14,277,130)	\$144,329,164	\$271,723,503

(1) Employee contributions began January 1, 2011 for members in the Year 2000 Plan - 2011 Tier.

(2) 2004 transfer from MOSERS for Highway Safety employees and 2011 transfer from MOSERS for Water Patrol employees.

Benefit Payments By Type

MoDOT and Patrol Employees' Retirement System Benefit Payments by Type, Last Ten Fiscal Years

Type of Benefit	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<u>Age and Service Benefits:</u>										
Retiree and Survivor Annuity Payments	\$145,118,809	\$151,647,091	\$159,145,368	\$167,654,271	\$175,588,494	\$183,103,253	\$188,171,369	\$195,964,396	\$205,617,640	\$212,840,210
BackDROP Payments	8,880,770	9,721,059	13,177,432	14,631,932	12,859,452	10,358,181	10,792,932	18,138,891	13,426,923	13,438,730
<u>Disability Benefits:</u>										
Long-Term Disability	475,948	386,026	288,908	223,501	179,239	137,624	101,875	85,240	79,964	79,184
Work-Related Disability	718,248	747,723	703,159	728,507	692,043	664,469	648,320	668,821	691,227	774,541
Normal Disability	295,776	244,208	220,490	207,417	186,349	163,485	167,427	166,140	138,281	121,872
Insured Disability	1,837,786	1,796,299	1,905,122	1,835,734	1,847,673	1,759,262	1,696,845	1,592,517	1,512,685	1,531,578
<u>Death Benefits</u>	415,000	455,000	530,000	520,000	660,000	535,000	575,000	675,000	665,000	703,571
<u>Service Transfer Payments</u> ⁽²⁾	0	0	0	0	0	0	0	2,410,526	2,357,080	1,876,336
<u>Employee Contribution Refunds</u> ⁽¹⁾	0	0	0	0	0	0	0	2,789	29,300	18,686
Total Benefits	\$157,742,337	\$164,997,406	\$175,970,479	\$185,801,362	\$192,013,250	\$196,721,274	\$202,153,768	\$219,704,320	\$224,518,100	\$231,384,708

(1) Employee contributions began January 1, 2011 for members in the Year 2000 Plan - 2011 Tier.

(2) Reciprocal transfer legislation enacted effective August 28, 2011.

Schedule of Retired Members By Type of Benefit

All Members*

Amount of Monthly Benefit	Type of Benefit					Survivor	Total Recipients
	Retirement		Disability				
	Normal	Early	Normal	Work-Related	Long-Term		
1 - 200	22	75	3	26	84	115	325
201 - 400	153	174	3	0	7	203	540
401 - 600	155	125	1	0	7	205	493
601 - 800	148	81	1	1	1	206	438
801 - 1000	180	53	3	1	1	169	407
1001 - 1200	260	28	1	2	0	140	431
1201 - 1400	310	12	1	1	1	124	449
1401 - 1600	391	8	2	3	0	98	502
1601 - 1800	377	4	0	5	0	85	471
1801 - 2000	378	3	0	4	0	81	466
2001 - 2200	334	4	0	5	0	65	408
2201 - 2400	325	0	0	3	0	67	395
2401 - 2600	328	0	0	1	0	47	376
2601 - 2800	329	1	0	1	0	51	382
2801 - 3000	279	1	0	1	0	48	329
> 3000	1,827	0	0	3	0	196	2,026
TOTALS	5,796	569	15	57	101	1,900	8,438

* This chart includes eight retirement system staff retirees

MoDOT

Amount of Monthly Benefit	Type of Benefit					Survivor	Total Recipients
	Retirement		Disability				
	Normal	Early	Normal	Work-Related	Long-Term		
1 - 200	15	57	3	23	74	107	279
201 - 400	112	140	3	0	7	183	445
401 - 600	105	105	1	0	5	182	398
601 - 800	107	71	1	1	1	182	363
801 - 1000	131	46	3	1	1	147	329
1001 - 1200	214	25	1	2	0	124	366
1201 - 1400	271	11	1	1	1	107	392
1401 - 1600	328	8	2	3	0	72	413
1601 - 1800	323	4	0	5	0	74	406
1801 - 2000	324	3	0	4	0	68	399
2001 - 2200	279	4	0	3	0	51	337
2201 - 2400	277	0	0	1	0	42	320
2401 - 2600	285	0	0	1	0	31	317
2601 - 2800	287	1	0	1	0	32	321
2801 - 3000	243	1	0	1	0	32	277
> 3000	1,096	0	0	2	0	151	1,249
TOTALS	4,397	476	15	49	89	1,585	6,611

Schedule of Retired Members By Type of Benefit

Uniformed Patrol

Amount of Monthly Benefit	Type of Benefit						Total Recipients
	Retirement		Disability			Survivor	
	Normal	Early	Normal	Work-Related	Long-Term		
1 - 200	1	0	0	2	0	1	4
201 - 400	3	0	0	0	0	5	8
401 - 600	10	0	0	0	0	5	15
601 - 800	11	0	0	0	0	5	16
801 - 1000	6	0	0	0	0	8	14
1001 - 1200	6	0	0	0	0	3	9
1201 - 1400	3	0	0	0	0	7	10
1401 - 1600	1	0	0	0	0	11	12
1601 - 1800	2	0	0	0	0	6	8
1801 - 2000	3	0	0	0	0	6	9
2001 - 2200	3	0	0	1	0	11	15
2201 - 2400	5	0	0	1	0	21	27
2401 - 2600	2	0	0	0	0	15	17
2601 - 2800	3	0	0	0	0	18	21
2801 - 3000	2	0	0	0	0	14	16
> 3000	636	0	0	1	0	41	678
TOTALS	697	0	0	5	0	177	879

Civilian Patrol

Amount of Monthly Benefit	Type of Benefit					Survivor	Total Recipients
	Retirement		Disability				
	Normal	Early	Normal	Work-Related	Long-Term		
1 - 200	5	18	0	1	10	7	41
201 - 400	38	34	0	0	0	15	87
401 - 600	40	20	0	0	2	18	80
601 - 800	30	10	0	0	0	19	59
801 - 1000	43	7	0	0	0	14	64
1001 - 1200	39	3	0	0	0	13	55
1201 - 1400	36	1	0	0	0	10	47
1401 - 1600	62	0	0	0	0	15	77
1601 - 1800	52	0	0	0	0	5	57
1801 - 2000	51	0	0	0	0	7	58
2001 - 2200	52	0	0	1	0	3	56
2201 - 2400	43	0	0	1	0	4	48
2401 - 2600	41	0	0	0	0	1	42
2601 - 2800	39	0	0	0	0	1	40
2801 - 3000	33	0	0	0	0	2	35
> 3000	90	0	0	0	0	4	94
TOTALS	694	93	0	3	12	138	940

Schedule of Average Monthly Benefit Payments

MoDOT

By Years of Service

Retired In Fiscal Year		0 - 10	11 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 +
2005	Average Benefit	\$447	506	930	1,249	2,100	2,267	2,699	3,676
2005	Average FAP	\$2,902	1,962	2,634	2,675	3,390	3,304	3,988	4,106
2005	Current Retirees	10	17	17	9	49	22	19	6
2006	Average Benefit	\$389	680	979	1,352	2,368	2,253	2,904	3,698
2006	Average FAP	\$3,213	2,350	2,763	2,949	3,420	3,238	4,093	4,086
2006	Current Retirees	12	14	15	23	54	30	10	7
2007	Average Benefit	\$290	567	895	1,304	2,421	2,679	2,785	3,443
2007	Average FAP	\$2,120	2,414	2,402	2,897	3,352	3,636	4,014	4,031
2007	Current Retirees	21	24	19	29	65	36	14	6
2008	Average Benefit	\$286	511	990	1,507	2,395	2,851	2,411	3,452
2008	Average FAP	\$2,268	2,402	2,995	3,392	3,435	3,917	3,513	4,463
2008	Current Retirees	28	28	26	35	57	50	18	5
2009	Average Benefit	\$320	653	1,089	1,763	2,407	2,799	3,016	3,526
2009	Average FAP	\$2,545	2,926	3,472	3,487	3,523	3,672	3,920	4,539
2009	Current Retirees	28	17	15	40	42	44	16	5
2010	Average Benefit	\$297	572	1,150	1,735	2,574	3,089	2,701	3,317
2010	Average FAP	\$2,388	2,535	3,356	3,511	3,643	3,953	4,015	4,008
2010	Current Retirees	26	24	16	38	60	41	3	3
2011	Average Benefit	\$323	584	978	1,885	2,847	3,216	3,056	3,928
2011	Average FAP	\$2,663	2,659	3,135	3,577	3,939	3,932	3,863	4,167
2011	Current Retirees	21	35	23	43	65	35	6	3
2012	Average Benefit	\$403	510	1,012	1,808	2,905	3,348	2,583	0
2012	Average FAP	\$2,945	2,769	3,432	3,529	4,226	4,272	3,785	0
2012	Current Retirees	36	23	39	63	106	56	4	0
2013	Average Benefit	\$289	567	1,149	1,813	2,924	3,076	4,512	2,363
2013	Average FAP	\$2,622	2,932	3,538	3,814	4,341	3,982	5,516	2,802
2013	Current Retirees	35	36	45	68	99	27	2	1
2014	Average Benefit	\$293	626	1,098	1,939	3,034	3,497	2,303	0
2014	Average FAP	\$2,487	3,032	3,416	3,851	4,501	4,606	3,781	0
2014	Current Retirees	29	27	22	43	76	14	2	0

FAP = Final Average Pay

Schedule of Average Monthly Benefit Payments

Uniformed Patrol

By Years of Service

Retired In Fiscal Year		0-10	11-15	16-20	21-25	26-30	31-35	36-40	41 +
2005	Average Benefit	\$447	506	930	1,249	2,100	2,267	2,699	3,676
2005	Average FAP	\$2,902	1,962	2,634	2,675	3,390	3,304	3,988	4,106
2005	Current Retirees	10	17	17	9	49	22	19	6
2006	Average Benefit	\$389	680	979	1,352	2,368	2,253	2,904	3,698
2006	Average FAP	\$3,213	2,350	2,763	2,949	3,420	3,238	4,093	4,086
2006	Current Retirees	12	14	15	23	54	30	10	7
2007	Average Benefit	\$290	567	895	1,304	2,421	2,679	2,785	3,443
2007	Average FAP	\$2,120	2,414	2,402	2,897	3,352	3,636	4,014	4,031
2007	Current Retirees	21	24	19	29	65	36	14	6
2008	Average Benefit	\$286	511	990	1,507	2,395	2,851	2,411	3,452
2008	Average FAP	\$2,268	2,402	2,995	3,392	3,435	3,917	3,513	4,463
2008	Current Retirees	28	28	26	35	57	50	18	5
2009	Average Benefit	\$320	653	1,089	1,763	2,407	2,799	3,016	3,526
2009	Average FAP	\$2,545	2,926	3,472	3,487	3,523	3,672	3,920	4,539
2009	Current Retirees	28	17	15	40	42	44	16	5
2010	Average Benefit	\$297	572	1,150	1,735	2,574	3,089	2,701	3,317
2010	Average FAP	\$2,388	2,535	3,356	3,511	3,643	3,953	4,015	4,008
2010	Current Retirees	26	24	16	38	60	41	3	3
2011	Average Benefit	\$323	584	978	1,885	2,847	3,216	3,056	3,928
2011	Average FAP	\$2,663	2,659	3,135	3,577	3,939	3,932	3,863	4,167
2011	Current Retirees	21	35	23	43	65	35	6	3
2012	Average Benefit	\$403	510	1,012	1,808	2,905	3,348	2,583	0
2012	Average FAP	\$2,945	2,769	3,432	3,529	4,226	4,272	3,785	0
2012	Current Retirees	36	23	39	63	106	56	4	0
2013	Average Benefit	\$289	567	1,149	1,813	2,924	3,076	4,512	2,363
2013	Average FAP	\$2,622	2,932	3,538	3,814	4,341	3,982	5,516	2,802
2013	Current Retirees	35	36	45	68	99	27	2	1
2014	Average Benefit	\$293	626	1,098	1,939	3,034	3,497	2,303	0
2014	Average FAP	\$2,487	3,032	3,416	3,851	4,501	4,606	3,781	0
2014	Current Retirees	29	27	22	43	76	14	2	0

FAP = Final Average Pay

Schedule of Average Monthly Benefit Payments

Civilian Patrol

By Years of Service

Retired In Fiscal Year		0-10	11-15	16-20	21-25	26-30	31-35	36-40	41+
2005	Average Benefit	\$266	461	849	1,188	2,718	2,737	2,112	4,144
2005	Average FAP	\$1,298	1,841	2,240	1,780	3,285	4,044	2,522	4,422
2005	Current Retirees	2	2	3	5	7	8	1	1
2006	Average Benefit	\$184	529	739	1,168	2,628	2,382	2,239	0
2006	Average FAP	\$2,080	2,066	2,003	2,537	3,343	3,439	3,235	0
2006	Current Retirees	4	5	2	11	7	12	2	0
2007	Average Benefit	\$310	535	628	1,072	2,440	2,342	1,759	0
2007	Average FAP	\$1,853	1,924	2,082	2,491	3,600	3,023	2,868	0
2007	Current Retirees	5	5	5	6	8	13	2	0
2008	Average Benefit	\$259	617	869	1,168	1,829	2,671	4,071	0
2008	Average FAP	\$2,186	2,736	2,551	2,658	2,753	3,796	4,151	0
2008	Current Retirees	6	6	7	5	8	11	1	0
2009	Average Benefit	\$224	366	620	0	2,572	2,585	2,110	2,391
2009	Average FAP	\$2,090	1,874	2,135	0	3,690	3,333	2,865	2,679
2009	Current Retirees	4	6	3	0	11	9	3	2
2010	Average Benefit	\$273	450	1,079	1,209	2,862	2,337	4,400	0
2010	Average FAP	\$2,285	2,124	3,091	2,654	4,106	3,188	5,179	0
2010	Current Retirees	8	3	5	8	5	3	2	0
2011	Average Benefit	\$319	525	811	1,831	2,706	2,844	0	0
2011	Average FAP	\$2,526	2,343	2,469	3,495	4,034	3,843	0	0
2011	Current Retirees	4	8	6	12	14	8	0	0
2012	Average Benefit	\$265	489	1,132	1,677	2,495	2,808	0	0
2012	Average FAP	\$2,136	2,289	3,501	3,115	3,690	3,458	0	0
2012	Current Retirees	8	6	4	8	16	6	0	0
2013	Average Benefit	\$314	498	915	1,836	2,345	2,723	0	0
2013	Average FAP	\$2,723	2,551	2,888	3,498	3,359	4,003	0	0
2013	Current Retirees	13	9	7	10	9	6	0	0
2014	Average Benefit	\$290	536	803	1,708	2,272	2,479	0	0
2014	Average FAP	\$2,319	2,803	2,511	3,580	3,792	3,105	0	0
2014	Current Retirees	9	12	7	7	13	3	0	0

FAP = Final Average Pay

Schedule of Average Monthly Benefit Payments

MPERS

By Years of Service

Retired In Fiscal Year		0-10	11-15	16-20	21-25	26-30	31-35	36-40	41+
2006	Average Benefit	\$0	0	0	0	0	3,543	0	0
2006	Average FAP	\$0	0	0	0	0	4,178	0	0
2006	Current Retirees	0	0	0	0	0	1	0	0
2007	Average Benefit	\$0	0	1,199	0	0	0	0	0
2007	Average FAP	\$0	0	3,081	0	0	0	0	0
2007	Current Retirees	0	0	1	0	0	0	0	0
2009	Average Benefit	\$0	0	0	0	0	4,622	0	8,069
2009	Average FAP	\$0	0	0	0	0	5,922	0	9,989
2009	Current Retirees	0	0	0	0	0	1	0	1
2012	Average Benefit	\$0	0	0	0	4,693	0	0	0
2012	Average FAP	\$0	0	0	0	7,087	0	0	0
2012	Current Retirees	0	0	0	0	1	0	0	0
2013	Average Benefit	\$0	0	0	0	0	9,648	0	0
2013	Average FAP	\$0	0	0	0	0	11,108	0	0
2013	Current Retirees	0	0	0	0	0	1	0	0

Note: There were no retirements during the years not shown above.

FAP = Final Average Pay

Active Member Data

Schedule of Participating Employers

	MoDOT		Patrol		MPERS		Total	
	Employees	%	Employees	%	Employees	%	Employees	%
2005	6,980	76.15	2,174	23.72	12	0.13	9,166	100
2006	6,839	75.91	2,159	23.96	12	0.13	9,010	100
2007	6,459	74.76	2,168	25.10	12	0.14	8,639	100
2008	6,376	74.30	2,192	25.55	13	0.15	8,581	100
2009	6,601	74.90	2,199	24.95	13	0.15	8,813	100
2010	6,164	73.21	2,243	26.64	13	0.15	8,420	100
2011	5,796	71.03	2,350	28.80	14	0.17	8,160	100
2012	5,093	68.42	2,337	31.39	14	0.19	7,444	100
2013	4,985	67.95	2,336	31.84	15	0.21	7,336	100
2014	5,041	67.98	2,357	31.79	17	0.23	7,415	100

Data for this chart is as of June 30, 2014.

Active Member Data

For the Year Ended June 30, 2014

By Age

Closed Plan

Age	Total	MoDOT	Civilian Patrol	Uniformed Patrol	MPERS
< 21	0	0	0	0	0
21 - 25	0	0	0	0	0
26 - 30	0	0	0	0	0
31 - 35	52	40	6	5	1
36 - 40	342	225	35	82	0
41 - 45	754	452	61	237	4
46 - 50	886	592	110	183	1
51 - 55	826	591	114	121	0
56 - 60	370	274	67	27	2
61 - 65	127	96	31	0	0
66+	14	10	4	0	0
Total	3,371	2,280	428	655	8
Average Age		48	50	46	45

Year 2000 Plan

Age	Total	MoDOT	Civilian Patrol	Uniformed Patrol	MPERS
< 21	0	0	0	0	0
21 - 25	30	20	4	6	0
26 - 30	403	222	60	121	0
31 - 35	628	384	101	142	1
36 - 40	501	339	65	96	1
41 - 45	391	289	71	29	2
46 - 50	336	256	68	11	1
51 - 55	334	284	49	1	0
56 - 60	211	168	42	1	0
61 - 65	77	60	17	0	0
66+	20	10	10	0	0
Total	2,931	2,032	487	407	5
Average Age		42	42	33	40

Year 2000 Plan - 2011 Tier

Age	Total	MoDOT	Civilian Patrol	Uniformed Patrol	MPERS
< 21	16	16	0	0	0
21 - 25	292	160	53	78	1
26 - 30	275	158	49	68	0
31 - 35	132	101	14	16	1
36 - 40	106	76	25	5	0
41 - 45	93	65	23	4	1
46 - 50	79	57	21	1	0
51 - 55	71	61	9	0	1
56 - 60	38	29	9	0	0
61 - 65	6	2	4	0	0
66+	5	4	1	0	0
Total	1,113	729	208	172	4
Average Age		34	35	26	37

Active Member Data

For the Year Ended June 30, 2014

By Years of Service

Closed Plan

Years of Service	Total	MoDOT	Civilian Patrol	Uniformed Patrol	MPERS
< 01	0	0	0	0	0
01 - 05	1	0	0	1	0
06 - 10	8	4	3	1	0
11 - 15	564	443	62	58	1
16 - 20	1,249	761	160	324	4
21 - 25	838	585	101	151	1
26 - 30	559	397	73	88	1
31 - 35	110	60	21	29	0
36 - 40	37	27	6	3	1
41 - 45	5	3	2	0	0
46+	0	0	0	0	0
Total	3,371	2,280	428	655	8
Average Service		21	21	21	21

Year 2000 Plan

Years of Service	Total	MoDOT	Civilian Patrol	Uniformed Patrol	MPERS
< 01	49	34	14	1	0
01 - 05	595	391	114	90	0
06 - 10	1,428	1,014	219	191	4
11 - 15	848	584	139	124	1
16 - 20	8	7	1	0	0
21 - 25	3	2	0	1	0
26 - 30	0	0	0	0	0
31 - 35	0	0	0	0	0
36 - 40	0	0	0	0	0
41 - 45	0	0	0	0	0
46+	0	0	0	0	0
Total	2,931	2,032	487	407	5
Average Service		8	8	8	8

Year 2000 Plan - 2011 Tier

Years of Service	Total	MoDOT	Civilian Patrol	Uniformed Patrol	MPERS
< 01	516	411	73	30	2
01 - 05	597	318	135	142	2
06 - 10	0	0	0	0	0
11 - 15	0	0	0	0	0
16 - 20	0	0	0	0	0
21 - 25	0	0	0	0	0
26 - 30	0	0	0	0	0
31 - 35	0	0	0	0	0
36 - 40	0	0	0	0	0
41 - 45	0	0	0	0	0
46+	0	0	0	0	0
Total	1,113	729	208	172	4
Average Service		0	1	1	1

Terminated Vested Member Data

For the Year Ended June 30, 2014

By Age

Closed Plan

Age	Total	MoDOT	Civilian Patrol	Uniformed Patrol	MPERS
< 21	0	0	0	0	0
21 - 25	0	0	0	0	0
26 - 30	0	0	0	0	0
31 - 35	29	24	5	0	0
36 - 40	160	128	20	11	1
41 - 45	360	264	32	64	0
46 - 50	414	326	41	47	0
51 - 55	432	364	52	16	0
56 - 60	176	161	15	0	0
61 - 65	28	25	3	0	0
66+	3	2	1	0	0
Total	1,602	1,294	169	138	1
Average Age	0	48	48	45	37

Year 2000 Plan

Age	Total	MoDOT	Civilian Patrol	Uniformed Patrol	MPERS
< 21	0	0	0	0	0
21 - 25	2	2	0	0	0
26 - 30	42	33	9	0	0
31 - 35	155	124	24	6	1
36 - 40	143	125	9	9	0
41 - 45	104	92	10	2	0
46 - 50	82	73	7	2	0
51 - 55	67	57	10	0	0
56 - 60	22	22	0	0	0
61 - 65	3	2	1	0	0
66+	0	0	0	0	0
Total	620	530	70	19	1
Average Age	0	40	39	37	32

Year 2000 Plan - 2011 Tier

Age	Total	MoDOT	Civilian Patrol	Uniformed Patrol	MPERS
< 21	0	0	0	0	0
21 - 25	0	0	0	0	0
26 - 30	0	0	0	0	0
31 - 35	0	0	0	0	0
36 - 40	0	0	0	0	0
41 - 45	0	0	0	0	0
46 - 50	0	0	0	0	0
51 - 55	0	0	0	0	0
56 - 60	0	0	0	0	0
61 - 65	0	0	0	0	0
66+	0	0	0	0	0
Total	0	0	0	0	0
Average Age	0	0	0	0	0

Terminated Vested Member Data

For the Year Ended June 30, 2014

By Years of Service

Closed Plan

Years of Service	Total	MoDOT	Civilian Patrol	Uniformed Patrol	MPERS
< 01	1	1	0	0	0
01 - 05	210	158	28	24	0
06 - 10	704	552	74	77	1
11 - 15	427	349	49	29	0
16 - 20	193	175	11	7	0
21 - 25	62	55	6	1	0
26 - 30	5	4	1	0	0
31 - 35	0	0	0	0	0
36 - 40	0	0	0	0	0
41 - 45	0	0	0	0	0
46+	0	0	0	0	0
Total	1,602	1,294	169	138	1
Average Service		11	10	9	8

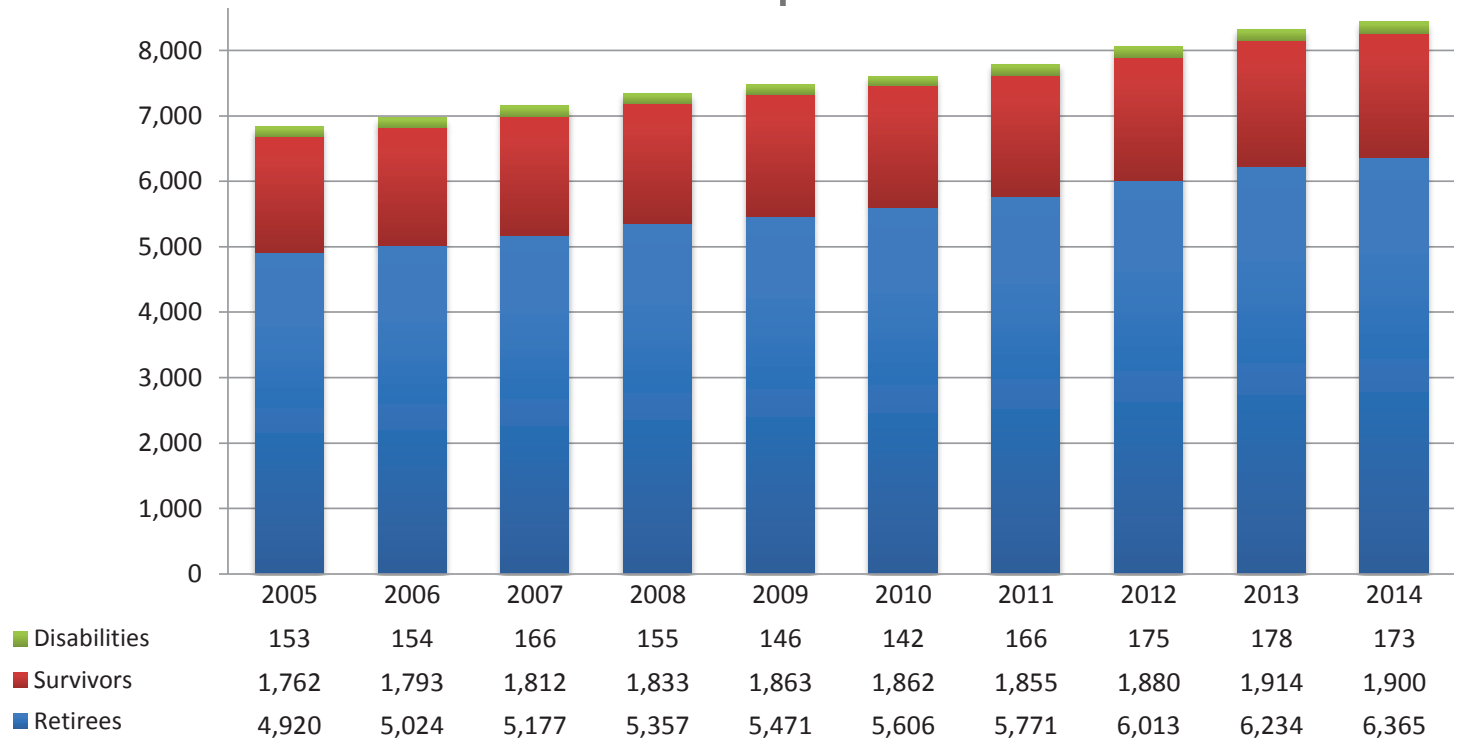
Year 2000 Plan

Years of Service	Total	MoDOT	Civilian Patrol	Uniformed Patrol	MPERS
< 01	1	1	0	0	0
01 - 05	149	121	24	3	1
06 - 10	422	367	39	16	0
11 - 15	47	40	7	0	0
16 - 20	1	1	0	0	0
21 - 25	0	0	0	0	0
26 - 30	0	0	0	0	0
31 - 35	0	0	0	0	0
36 - 40	0	0	0	0	0
41 - 45	0	0	0	0	0
46+	0	0	0	0	0
Total	620	530	70	19	1
Average Service		7	7	7	5

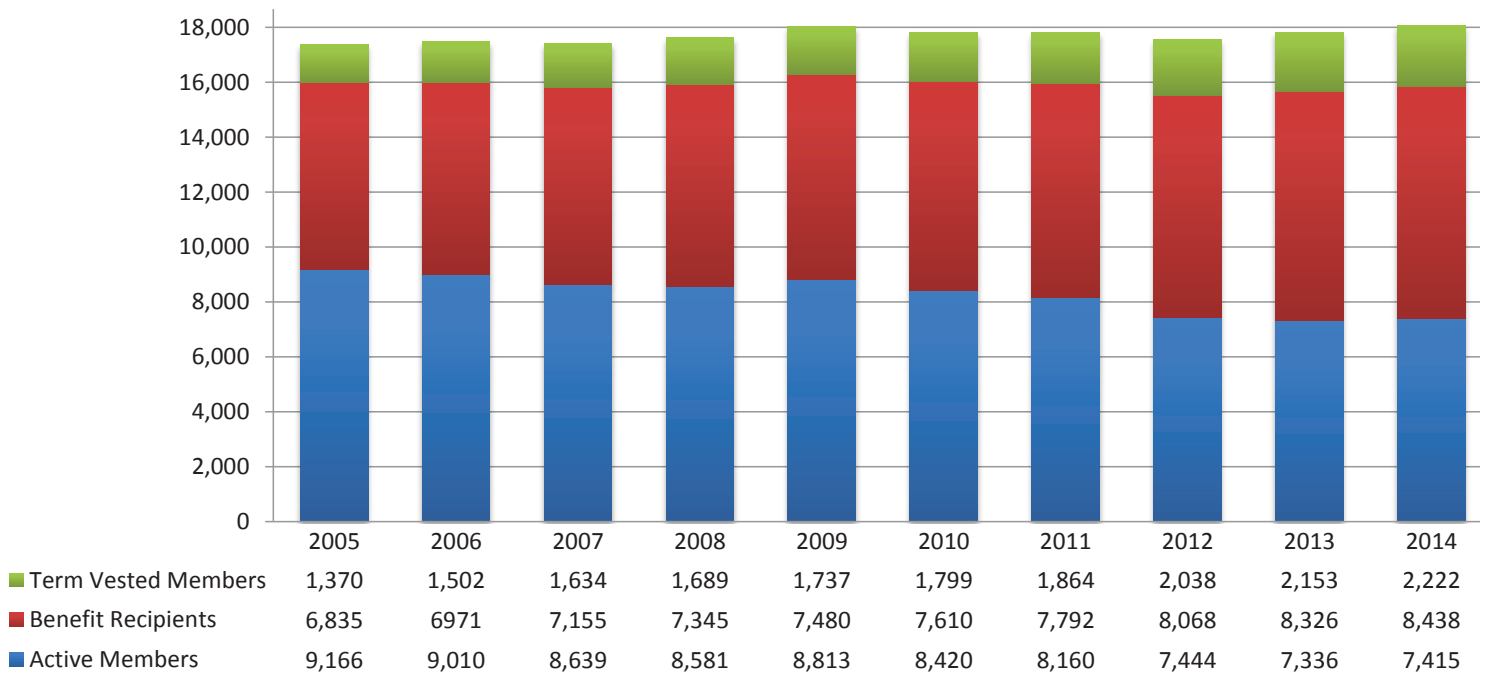
Year 2000 Plan - 2011 Tier

Years of Service	Total	MoDOT	Civilian Patrol	Uniformed Patrol	MPERS
< 01	0	0	0	0	0
01 - 05	0	0	0	0	0
06 - 10	0	0	0	0	0
11 - 15	0	0	0	0	0
16 - 20	0	0	0	0	0
21 - 25	0	0	0	0	0
26 - 30	0	0	0	0	0
31 - 35	0	0	0	0	0
36 - 40	0	0	0	0	0
41 - 45	0	0	0	0	0
46+	0	0	0	0	0
Total	0	0	0	0	0
Average Service		0	0	0	0

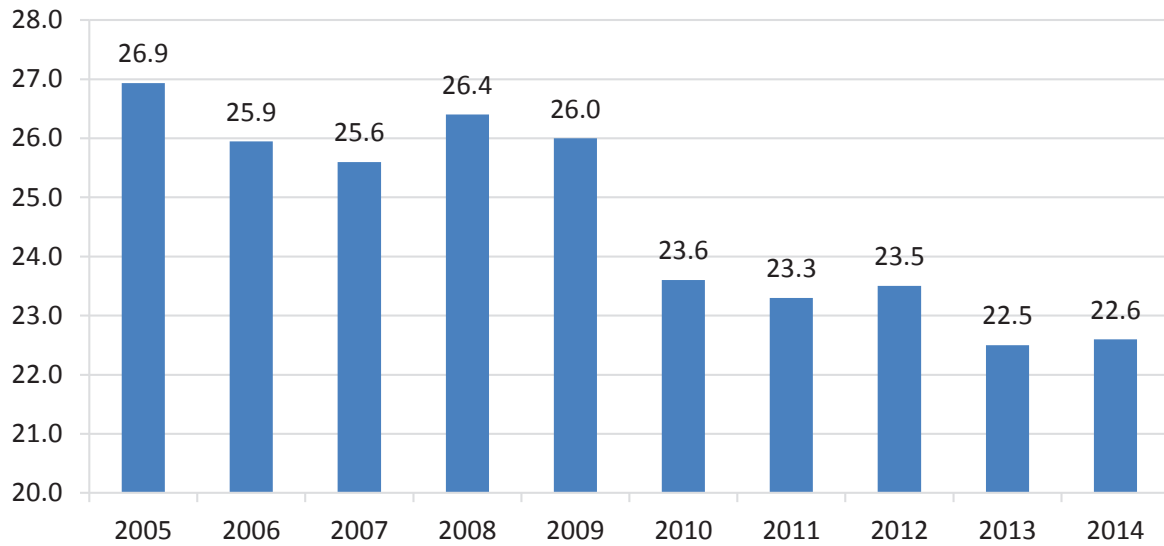
Benefit Recipients



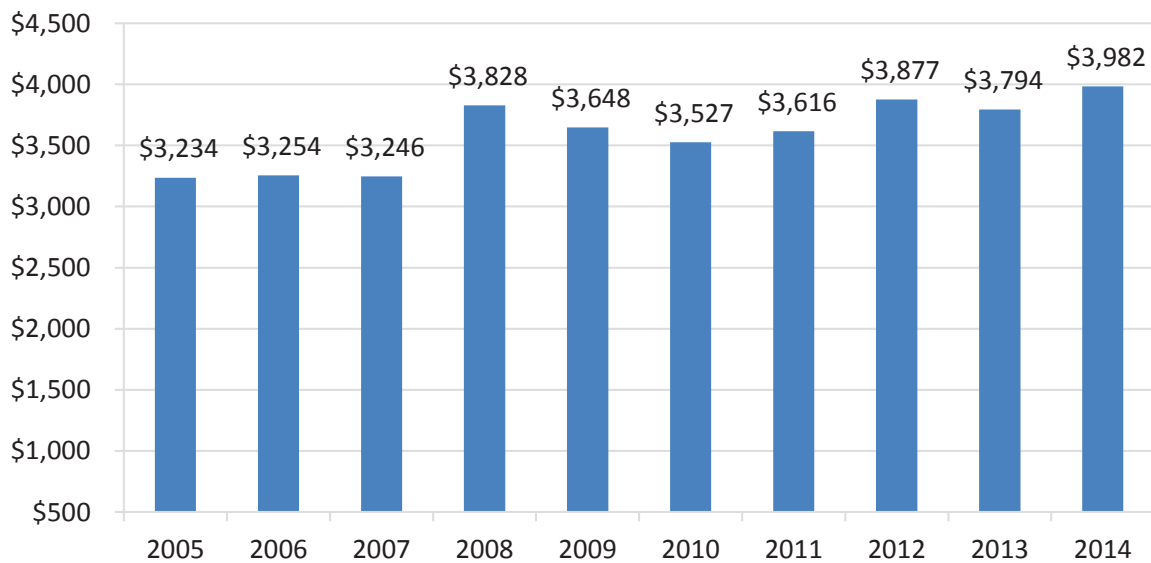
Membership Distribution



Average Years of Service for New Retirees



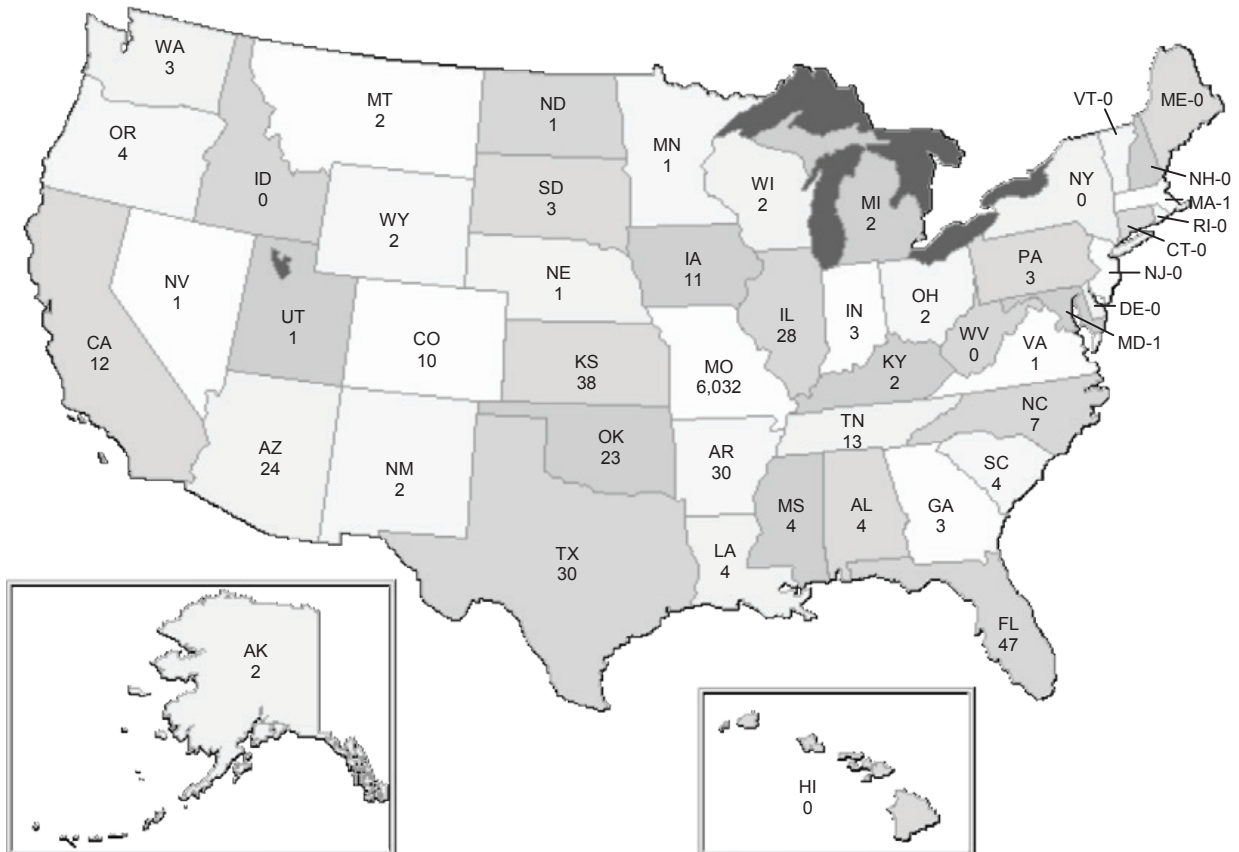
Final Average Pay for New Retirees



Location of MPERS Retirees

For the Year Ended June 30, 2014

This map represents the demographic distribution of retirees by state.



1 Retiree resides in England

Notes

Notes

Notes